

CERTIFICARI ECHIPAMENTE
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Procedura publica nr. ocds-b3wdp1-MD-1766582680043
Sistem integrat pentru operarea transportului public în mun. Ungheni

PRIMARIA MUNICIPIULUI UNGHENI



MINISTERIO
DE INDUSTRIA, ENERGÍA
Y TURISMO

DIRECCIÓN GENERAL DE INDUSTRIA Y
DE LA PEQUEÑA Y MEDIANA EMPRESA
SUBDIRECCIÓN GENERAL DE
CALIDAD Y SEGURIDAD INDUSTRIAL



E9-10R-04.1482

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Comunicación relativa a ⁽¹⁾ / *Communication concerning the ⁽¹⁾:*

- la concesión de una homologación / *approval granted*
- ~~la extensión de una homologación / *approval extended*~~
- ~~la denegación de una homologación / *approval refused*~~
- ~~la retirada de una homologación / *approval withdrawn*~~
- ~~el cese definitivo de una homologación / *production definitely discontinued*~~

de un tipo de subconjunto eléctrico / electrónico ⁽¹⁾ en aplicación del Reglamento nº 10.04 / *of a type of electrical / electronic sub-assembly ⁽¹⁾ with regard to ECE Regulation No. 10.04*

Nº de homologación / *Type-approval No.*: E9-10R-04.1482

Nº de extensión / *Extension No.*: ---

1. Marca (razón social) / *Make (trade name of manufacturer)*: LILLIPUT
2. Tipo y denominación(es) comercial (es) / *Type and general commercial description(s)*:
Tipo / *Type*: 669/779
Variantes / *Variants*: 669, 779
Denominación comercial / *Commercial description*: TFT LCD COLOR MONITOR
3. Medio de identificación del tipo, si está marcado en ~~el vehículo~~, el componente ~~o la unidad técnica independiente~~ ⁽¹⁾ / *Means of identification of type, if marked on the ~~vehicle~~/component/~~separate technical unit~~ ⁽¹⁾*: Ver documentación técnica / *See technical documentation*
- 3.1. Emplazamiento de estas marcas / *Location of that marking*: Ver documentación técnica / *See technical documentation*
4. Categoría de vehículo / *Category of vehicle*: ---
5. Nombre y dirección del fabricante / *Name and address of manufacturer*:
Zhangzhou LILLIPUT Electronic Technology Co., Ltd.
Zongsi Road, Lantian Economic Development Zone, Zhangzhou, Fujian, 363005, China
6. Emplazamiento y forma de colocación de la marca de homologación en componentes y unidades técnicas independientes / *In the case of components and separate technical units, location and method of affixing of the approval mark*: Ver documentación técnica / *See technical documentation*
7. Dirección(es) de la(s) planta(s) de montaje / *Address(es) of assembly plant(s)*:
Zhangzhou LILLIPUT Electronic Technology Co., Ltd.
Zongsi Road, Lantian Economic Development Zone, Zhangzhou, Fujian, 363005, China
8. Información complementaria (si procede) / *Additional information (where applicable)*: Véase el apéndice / *See appendix*

(1) Tachar lo que no proceda / *Strike out what does not apply*



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9. Servicio técnico encargado de la realización de los ensayos / *Technical service responsible for carrying out the tests*: IDIADA
10. Fecha del acta de ensayo / *Date of test report*: 24.09.2014
11. Número del acta de ensayo / *Number of test report*: CN14090302
12. Observaciones (si las hubiera) / *Remarks (if any)*: Véase el apéndice / *See appendix*
13. Lugar / *Place*: Madrid
14. Fecha / *Date*: Ver firma electrónica / *See digital signature*
15. Firma / *Signature*:

EL SUBDIRECTOR GENERAL DE CALIDAD Y SEGURIDAD INDUSTRIAL
Resolución P.D. 25-10-2012
16. Se adjunta el índice del expediente de homologación en posesión de las autoridades competentes, la cual puede obtenerse a petición del interesado / *The index to the information package lodged with the approval authority, which may be obtained on request is attached*
17. Motivos de extensión / *Reasons for extension*: ----



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**Apéndice del certificado de homologación N° E9-10R-04.1482
relativo a la homologación de subconjuntos eléctricos o electrónicos en lo que se refiere al Reglamento N°10**

***Appendix to Type-approval communication form N° E9-10R-04.1482
concerning the type-approval of an electrical/electronic sub-assembly under Regulation N° 10.***

1. Información adicional / *Additional information (where applicable):*
 - 1.1. Tensión nominal del sistema eléctrico / *Electrical system rated voltage:* Ver documentación técnica / *See technical documentation*
 - 1.2. Este SEE puede utilizarse en todos los vehículos con las siguientes restricciones / *This ESA can be used on any vehicle type with the following restrictions:* Sí / *Yes*
 - 1.2.1. Condiciones de instalación, si las hubiera / *Installation conditions, if any:* ---
 - 1.3. Este SEE sólo puede utilizarse en los tipos de vehículo siguientes / *This ESA can only be used on the following vehicle types:* ---
 - 1.3.1. Condiciones de instalación si las hubiera / *Installation conditions, if any:* ---
 - 1.4. El método o métodos específicos de ensayo utilizados y los márgenes de frecuencias abarcados para determinar la inmunidad han sido / *The specific test method(s) used and the frequency ranges covered to determine immunity were:* Ver informe de ensayo n° / *See test report No.* CN14090302
 - 1.5. Servicio técnico acreditado según ISO 17025 y reconocido por el organismo homologador responsable de realizar los ensayos/ *Technical service accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests:* IDIADA
2. Observaciones/ *Remarks (if any):* ---



Shenzhen SEM.Test Technology Co., Ltd.

1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,

Bao'an District, Shenzhen, P.R.C. (518101)

CERTIFICATE OF CONFORMITY

Certificate No.: SEM16117968

The following product has been tested by Shenzhen SEM.Test Technology Co., Ltd. with the listing standards and found in conformity with the **EC Directive 2014/30/EU**. It is possible to use CE marking to demonstrate the conformity with this **EMC Directive**.

Report No. : STR16118257E

Applicant : ZHANGZHOU LILLIPUT ELECTRONIC TECHNOLOGY CO., LTD.

Address : Zong Si Road, Lan Tian Industrial Zone, Zhang Zhou, Fu Jian, China

Manufacturer : ZHANGZHOU LILLIPUT ELECTRONIC TECHNOLOGY CO., LTD.

Address : Zong Si Road, Lan Tian Industrial Zone, Zhang Zhou, Fu Jian, China

Description of Product : TFT LCD COLOR MONITOR

Model No. : 669, 619, 619A, 619AT, 629, 809, 859, 869, 889, 779, EBY701

Trade Name : LILLIPUT

Test Standards : EN 55032:2012+AC:2013
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 55020:2007+A11:2011

The referred test report(s) show that the product complies with the essential requirements in the above listed standards. The applicant is authorized to use this certificate in connection with the EC declaration of conformity according to Annex 1 of the Directive.



Test Laboratory

Jandy So

Jandy So
Supervisor

Date of Issue: Dec 07, 2016



This certificate of conformity is based on a single evaluation of the submitted sample(s) of the above mentioned product. It does not imply an assessment of the whole production and other relevant Directives have to be observed.

Test Verification of Conformity

Verification Number: BCTC2403760832C

Applicant : Shenzhen Xin Secco Technology Development Co., Ltd.
Room 1 008, Building 6, Evergrande Fashion Huigu Building
(East), beside Fulong Road, Henglang Community, Dalang
Street, Longhua District, Shenzhen 518109

Manufacturer : Yanling Smart Manufacturing Technology (Dongguan) Co.,
LTD
Room 501, Building 15, 1 Jingdong Road, Fenggang Town,
Dongguan City, Guangdong Province

Product : Mini PC

Trademark : Yanling

Model/Type Reference : N15
N3 Plus, N5 Plus, N11, N12, N13, N15, N16, N17, N18, NUC-C3,
N1121, N1221, N1321, N1421

Report Number : BCTC2403760832E

Test Standard : EN 55032:2015+A1:2020, EN 55035:2017+A11:2020

On the basis of the referenced test report(s), sample(s) tested of the above product have been found to comply with the standards harmonized with Annex I of Council EMC Directive 2014/30/EU at the time the tests were carried out. Other standards and Directives may be relevant to the product. This verification is part of the full test report(s) and should be read in conjunction with it <them>.

Once compliance with all product relevant **CE** mark directives are verified, including any relevant e.g. risk assessment and production control, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to products identical to the tested sample(s).



Tel: 400-788-9558 / 0755-32936262

www.chnbctc.com

This Verification is for the exclusive use of BCTC's client and is provided pursuant to agreement between BCTC and its client. BCTC's responsibility and liability are limited to the terms and conditions of the agreement. The observation and test results referenced in this Verification are relevant only to the sample tested. This Verification by itself does not imply that the material, product, or service is or has ever been under a BCTC certification program.

TEST REPORT

Report No.: BCTC2403760832E

Applicant: Shenzhen Xin Secco Technology Development Co., Ltd.

Product Name: Mini PC

Test Model: N15

Tested Date: 2022-01-07 to 2022-01-14

Issued Date: 2024-03-29



Shenzhen BCTC Testing Co., Ltd.

Product Name: Mini PC

Trademark: Yanling

Model/Type reference: N15
N3 Plus, N5 Plus, N11, N12, N13, N15, N16, N17, N18, NUC-C3, N1121, N1221, N1321, N1421

Prepared For: Shenzhen Xin Secco Technology Development Co., Ltd.

Address: Room 1 008, Building 6, Evergrande Fashion Huigu Building (East), beside Fulong Road, Henglang Community, Dalang Street, Longhua District, Shenzhen 518109

Manufacturer: Yanling Smart Manufacturing Technology (Dongguan) Co., LTD

Address: Room 501, Building 15, 1 Jingdong Road, Fenggang Town, Dongguan City, Guangdong Province

Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Sample Received Date: 2022-01-07

Sample tested Date: 2022-01-07 to 2022-01-14

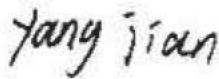
Issue Date: 2024-03-29

Report No.: BCTC2403760832E

Test Standards EN 55032:2015+A1:2020, EN 55035:2017+A11:2020

Test Results PASS

Tested by:



Yangjian /Project Handler

Approved by:



Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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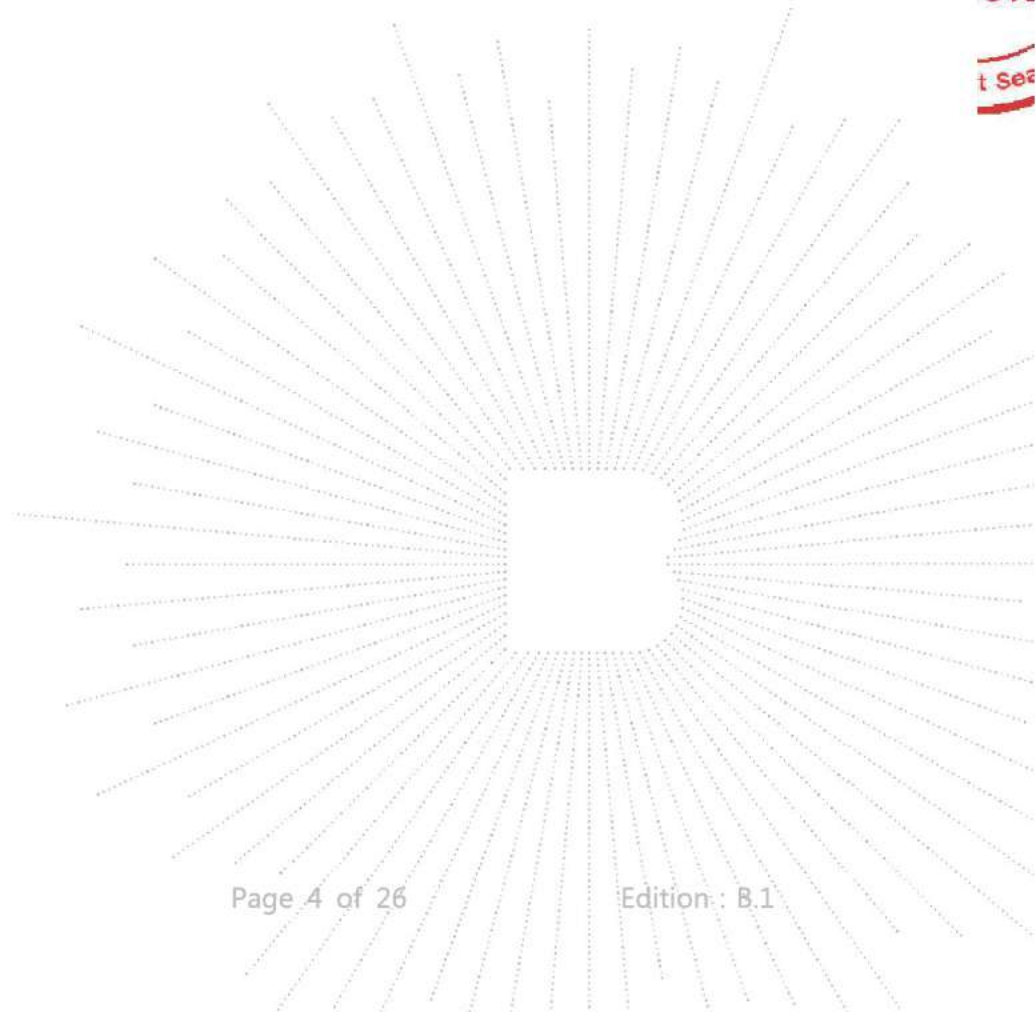
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(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2403760832E	2024-03-29	Original	Valid

TEC
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2. Test Summary

The Product has been tested according to the following specifications:

Emission		
Standard	Test Item	Test result
EN 55032	Conducted emissions from the AC mains power ports	N/A ¹
EN 55032	Asymmetric mode conducted emissions	Pass
EN 55032	Conducted differential voltage emissions	N/A ¹
EN 55032	Radiated emissions	Pass

Immunity		
Standard	Test Item	Test result
IEC 61000-4-2	Electrostatic discharge (ESD)	Pass
IEC 61000-4-3	Continuous RF electromagnetic field disturbances(RS)	Pass
IEC 61000-4-4	Electrical fast transients/burst (EFT)	N/A ¹
IEC 61000-4-5	Surges	N/A ¹
IEC 61000-4-6	Continuous induced RF disturbances (CS)	N/A ¹
IEC 61000-4-6	Broadband impulse noise disturbances, repetitive	N/A ²
IEC 61000-4-6	Broadband impulse noise disturbances, isolated	N/A ²
IEC 61000-4-8	Power frequency magnetic field (PFMF)	N/A ³
IEC 61000-4-11	Voltage dips and interruptions (DIPS)	N/A ¹

Remark:

1. The EUT is a powered by USB port.
2. Applicable only to CPE xDSL ports.
3. The Product doesn't contain any device susceptible to magnetic fields.

Remark: Based on the following changes in the original test report (BCTC2112292747E), No changes were made to the product.

Only changes Applicant Company, Applicant Address, Manufacturer Company, Manufacturer Address, Serial Models, Trademark.

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Test item	Value (dB)
Conducted Emission (150kHz-30MHz)	3.20
Radiated Emission(30MHz~1GHz)	4.80
Radiated Emission(1GHz~6GHz)	4.90

CO.LTD

4. Product Information And Test Setup

4.1 Product Information

Ratings: DC 12V From Battery

Model differences: Only the model name is different, the appearance is different, everything else is the same

The highest frequency of the internal sources of the EUT is (less than 108)MHz:

- ☒ less than 108 MHz, the measurement shall only be made up to 1 GHz.
- ☐ between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.
- ☐ between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.
- ☐ above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.

Cable of Product

No.	Cable Type	Quantity	Provider	Length(m)	Specification	Note
1	---	---	Applicant	---	Shielded	---
2	---	---	BCTC	---	Unshielded	---

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1.	Display	AOC	T3250MDK	---	---

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use

4.4 Test Mode

Test item	Test Mode	Test Voltage
Asymmetric mode conducted emissions(150KHz-30MHz) Class B	Working 1	DC 12V
Radiated disturbance(30MHz-1GHz) Class B	Working 1	DC 12V*
	Working 2	DC 12V
Electrostatic discharge (ESD) B <input checked="" type="checkbox"/> Air Discharge: $\pm 8\text{Kv}$ <input checked="" type="checkbox"/> Contact Discharge: $\pm 4\text{kV}$ <input checked="" type="checkbox"/> HCP & VCP: $\pm 4\text{kV}$	Working 1	DC 12V
	Working 2	DC 12V
Continuous RF electromagnetic field disturbances(RS) A 80MHz-1000MHz,1800MHz,2600MHz, 3500MHz,5000MHz, 3V/m,80%	Working 1	DC 12V
	Working 2	DC 12V
All test mode were tested and passed, only shows (*) is the worst case mode which were recorded in this report.		
Working 1: HDMI+ mouse + keyboard + burner software +T-C usb flash drive +ping IP Working 2: DP+ mouse + keyboard + burner software +T-C usb flash drive +ping IP		

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 Test Instrument Used

Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
LISN	R&S	ENV216	101375	May 28, 2021	May 27, 2022
ISN	HPX	ISN T800	S1509001	May 28, 2021	May 27, 2022
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 28, 2021	May 27, 2022

Radiated Emissions Test (966 Chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Jun. 06, 2020	Jun. 05, 2023
Receiver	R&S	ESRP	101154	May 28, 2021	May 27, 2022
Receiver	R&S	ESR3	102075	May 28, 2021	May 27, 2022
Amplifier	SKET	LAPA_01G18 G-45dB	\	May 28, 2021	May 27, 2022
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 28, 2021	May 27, 2022
TRILOG Broadband Antenna	schwarzbeck	VULB9163	942	Jun. 01, 2021	May 31, 2022
Horn Antenna	schwarzbeck	BBHA9120D	1541	Jun. 02, 2021	Jun. 01, 2022
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

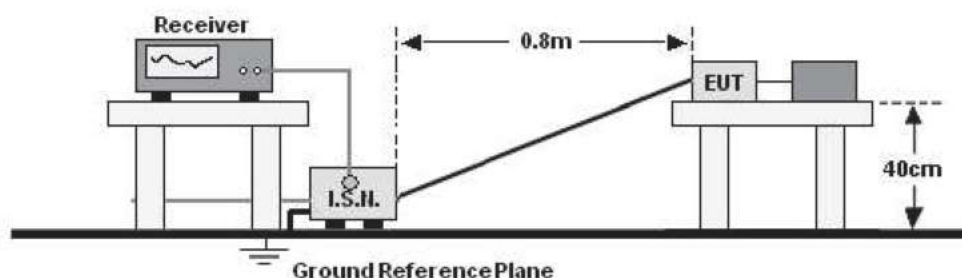
Electrostatic Discharge Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
ESD Tester	KIKUSUI	KES4201A	UH002321	May 31, 2021	May 30, 2022

Continuous RF Electromagnetic Field Disturbances Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power meter	Keysight	E4419	\	May 28, 2021	May 27, 2022
Power sensor	Keysight	E9300A	\	May 28, 2021	May 27, 2022
Power sensor	Keysight	E9300A	\	May 28, 2021	May 27, 2022
Amplifier	SKET	HAP_801000-250W	\	May 28, 2021	May 27, 2022
Amplifier	SKET	HAP_0103-75W	\	May 28, 2021	May 27, 2022
Amplifier	SKET	HAP_0306-50W	\	May 28, 2021	May 27, 2022
Stacked double Log.-Per. Antenna	Schwarzbeck	STLP 9129	\	\	\
Field Probe	Narda	EP-601	\	Jun. 29, 2021	Jun. 28, 2022
Signal Generator	Agilent	N5181A	MY50143748	Jun. 29, 2021	Jun. 28, 2022
Software	SKET	EMC-S	1.2.0.18	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup

For asymmetric mode ports:



6.2 Limit

Limits for asymmetric mode conducted emissions of Class B MME

Frequency range (MHz)	Voltage Limits dB(μ V)		Current Limits dB(μ A)	
	Quasi-peak	Average	Quasi-peak	Average
0,15 to 0,50	84-74	74-64	40-30	30-20
0,50 to 30	74	64	30	20

Notes: *Decreasing linearly with logarithm of frequency.

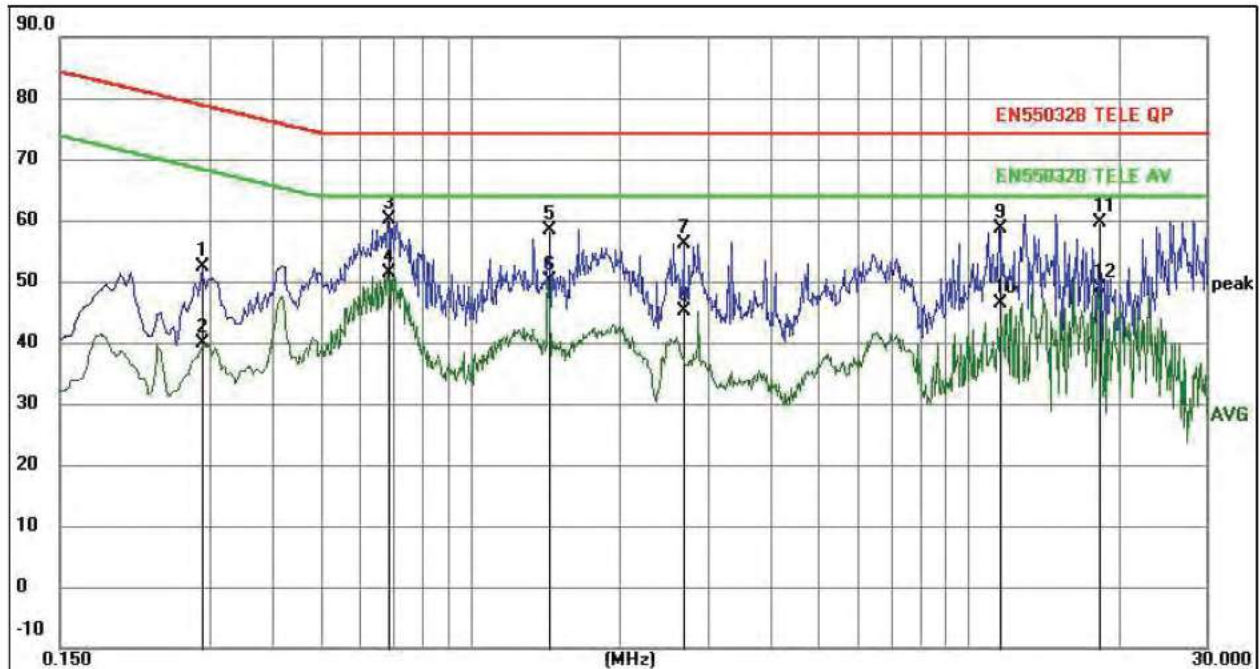
6.3 Test procedure

For asymmetric mode ports:

- The Product was placed on a non-conductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the associated port through current probe.
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Phase :	TELE
Test Voltage :	DC 12V	Test Mode:	Working 1



Remark:

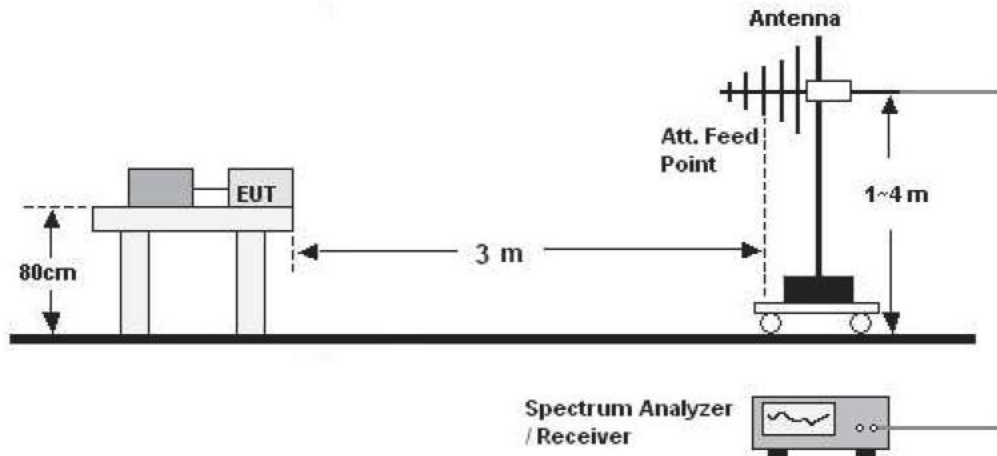
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No. Mk.	Freq. MHz	Reading Level	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	0.2894	32.76	19.51	52.27	78.54	-26.27	QP
2	0.2894	20.30	19.51	39.81	68.54	-28.73	AVG
3	0.6854	40.41	19.62	60.03	74.00	-13.97	QP
4 *	0.6854	31.66	19.62	51.28	64.00	-12.72	AVG
5	1.4369	38.68	19.73	58.41	74.00	-15.59	QP
6	1.4369	30.29	19.73	50.02	64.00	-13.98	AVG
7	2.6880	36.46	19.71	56.17	74.00	-17.83	QP
8	2.6880	25.39	19.71	45.10	64.00	-18.90	AVG
9	11.5260	38.60	19.91	58.51	74.00	-15.49	QP
10	11.5260	26.44	19.91	46.35	64.00	-17.65	AVG
11	18.2443	39.61	20.04	59.65	74.00	-14.35	QP
12	18.2443	28.77	20.04	48.81	64.00	-15.19	AVG

7. Radiated Emissions Test

7.1 Block Diagram Of Test Setup

30MHz ~ 1GHz:



7.2 Limits

Limits for radiated disturbance of Class B MME

Frequency (MHz)	Quasi-peak limits at 3m dB(μ V/m)
30-230	40
230-1000	47

Note: The lower limit shall apply at the transition frequencies.

7.3 Test Procedure

30MHz ~ 1GHz:

- The Product was placed on the nonconductive turntable 0.8 m above the ground in a semi anechoic chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

7.4 Test Results

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Voltage :	DC 12V	Test Mode:	Working 1



Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Measurement = Reading Level + Correct Factor
- Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		56.1974	46.82	-15.51	31.31	40.00	-8.69	QP
2		197.8928	47.88	-16.43	31.45	40.00	-8.55	QP
3		444.8514	46.40	-10.09	36.31	47.00	-10.69	QP
4		595.1329	43.82	-6.63	37.19	47.00	-9.81	QP
5	!	742.2587	46.02	-4.46	41.56	47.00	-5.44	QP
6	*	890.7278	43.54	-1.69	41.85	47.00	-5.15	QP

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Voltage :	DC 12V	Test Mode:	Working 1



Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Measurement = Reading Level + Correct Factor
- Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	!	167.8243	53.02	-18.36	34.66	40.00	-5.34	QP
2	!	197.2001	54.22	-16.48	37.74	40.00	-2.26	QP
3		276.1235	53.28	-14.34	38.94	47.00	-8.06	QP
4		595.1329	43.86	-6.63	37.23	47.00	-9.77	QP
5	*	742.2587	50.96	-4.46	46.50	47.00	-0.50	QP
6	!	890.7278	45.20	-1.69	43.51	47.00	-3.49	QP

8. Immunity Test Of General The Performance Criteria

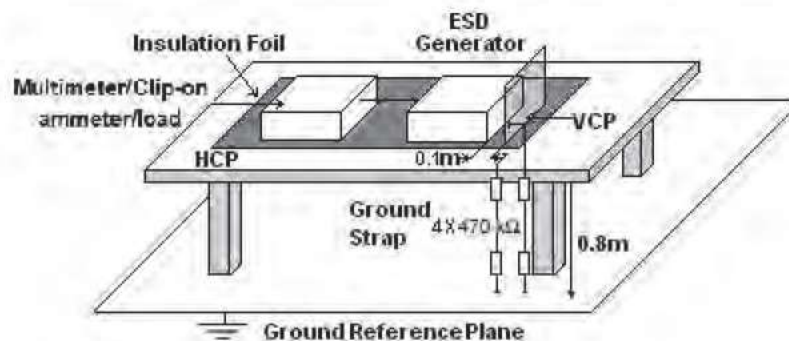
Product Standard	EN 55035:2017+A11:2020 clause 8
CRITERION A	The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
CRITERION B	During the application of the disturbance, degradation of performance is allowed. However, no unintended change of actual operating state or stored data is allowed to persist after the test. After the test, the equipment shall continue to operate as intended without operator intervention; no degradation of performance or loss of function is allowed, below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level (or the permissible performance loss), or recovery time, is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
CRITERION C	Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. A reboot or re-start operation is allowed. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

9. Electrostatic Discharge (ESD)

9.1 Test Specification

Test Port	Enclosure port
Discharge Impedance	330 ohm / 150 pF
Discharge Mode	Single Discharge
Discharge Period	one second between each discharge

9.2 Block Diagram of Test Setup



9.3 Test Procedure

- Electrostatic discharges were applied only to those points and surfaces of the Product that are accessible to users during normal operation.
- The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.
- The time interval between two successive single discharges was at least 1 second.
- The ESD generator was held perpendicularly to the surface to which the discharge was applied and the return cable was at least 0.2 meters from the Product.
- Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.
- Air discharges were applied with the round discharge tip of the discharge electrode approaching the Product as fast as possible (without causing mechanical damage) to touch the Product. After each discharge, the ESD generator was removed from the Product and re-triggered for a new single discharge. The test was repeated until all discharges were complete.
- At least ten single discharges (in the most sensitive polarity) were applied to the Horizontal Coupling Plane at points on each side of the Product. The ESD generator was positioned vertically at a distance of 0.1 meters from the Product with the discharge electrode touching the HCP.
- At least ten single discharges (in the most sensitive polarity) were applied to the center of one vertical edge of the Vertical Coupling Plane in sufficiently different positions that the four faces of the Product were completely illuminated. The VCP (dimensions 0.5m x 0.5m) was placed vertically to and 0.1 meters from the Product.

9.4 Test Results

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Mode:	Working 1/ Working 2
Test Voltage :	DC 12V		

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	4	10	B	A
	Indirect Discharge HCP	4	10	B	A
	Indirect Discharge VCP	4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	8	10	B	A

CO.LTD

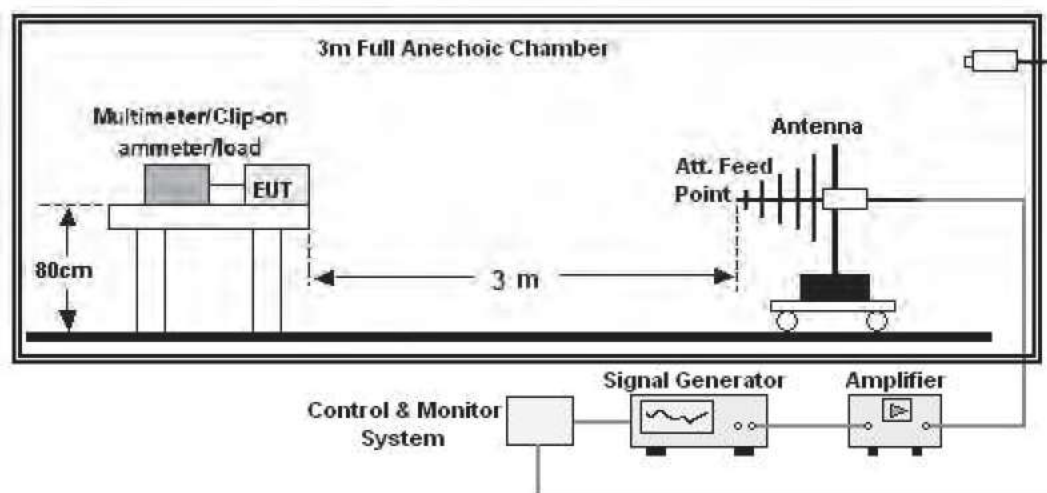
10. Continuous RF Electromagnetic Field Disturbances (RS)

10.1 Test Specification

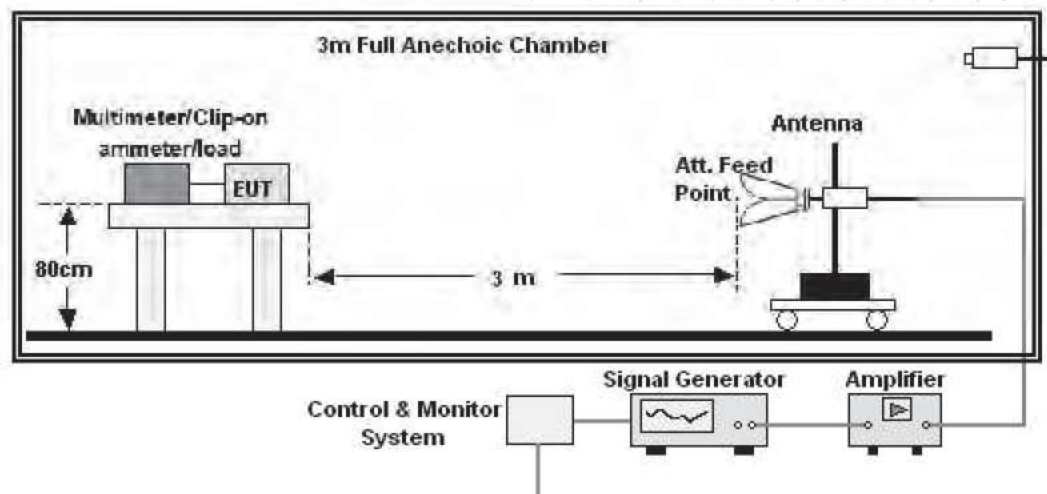
Test Port	: Enclosure port
Step Size	: 1%
Modulation	: 1kHz, 80% AM
Dwell Time	: 1 second
Polarization	: Horizontal & Vertical

10.2 Block Diagram of Test Setup

Below 1GHz:



Above 1GHz:



10.3 Test Procedure

- a. The testing was performed in a fully-anechoic chamber. The transmit antenna was located at a distance of 3 meters from the Product.
- b. The frequency range is swept from 80MHz to 1000MHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave, and the step size was 1%.
- c. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised and to be able to respond, but should not exceed 5 s at each of the frequencies during the scan.
- d. The test was performed with the Product exposed to both vertically and horizontally polarized fields on each of the four sides.
- e. For Broadcast reception function: Group 2 not apply in this test.

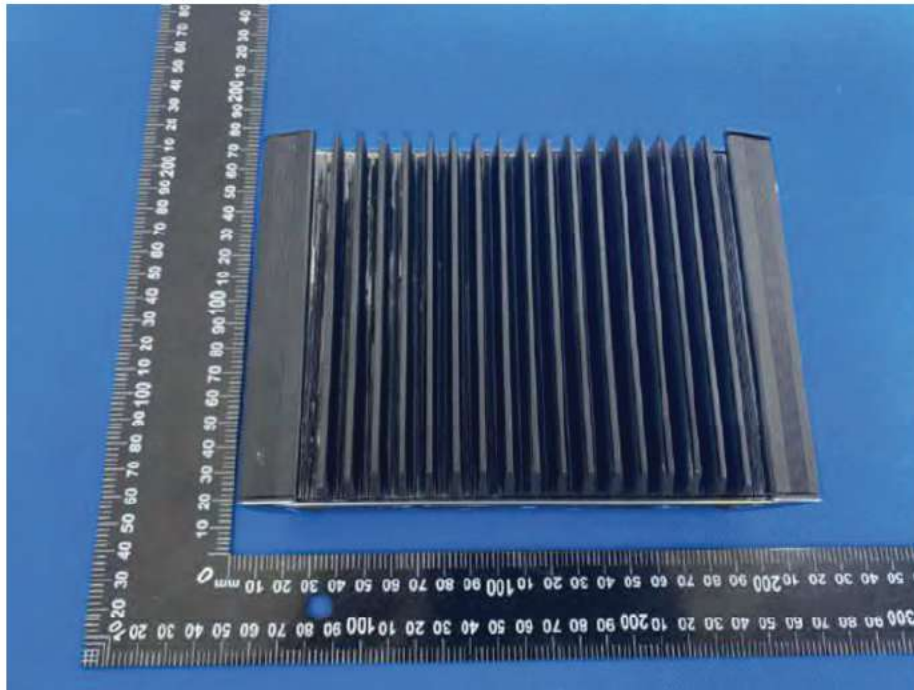
10.4 Test Results

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Mode:	Working 1/ Working 2
Test Voltage :	DC 12V		

Frequency	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000MHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz	Front, Right, Back, Left	3	A	A

11. EUT Photographs

EUT Photo 1



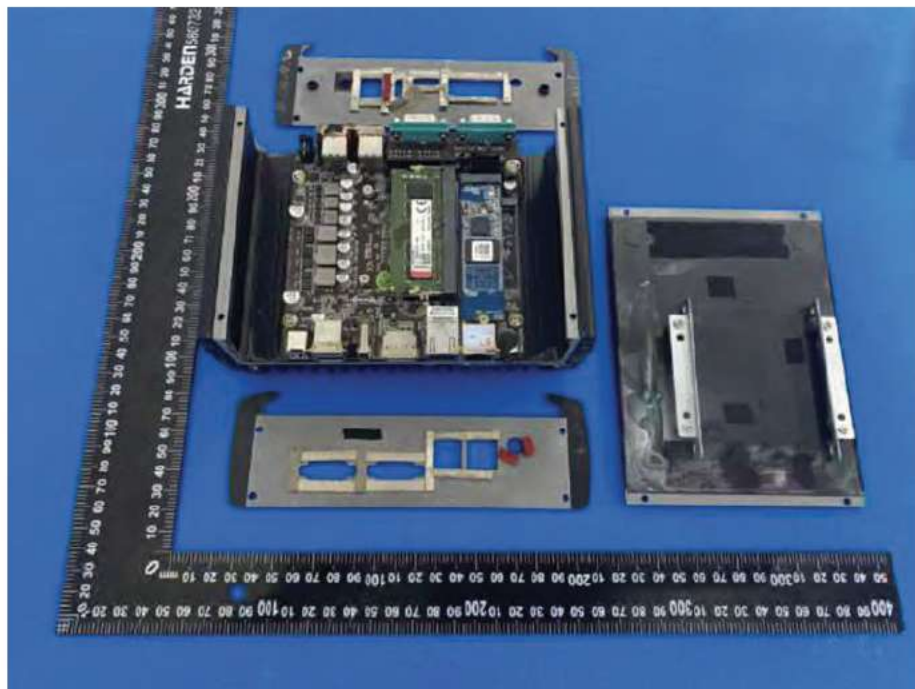
EUT Photo 2



EUT Photo 3



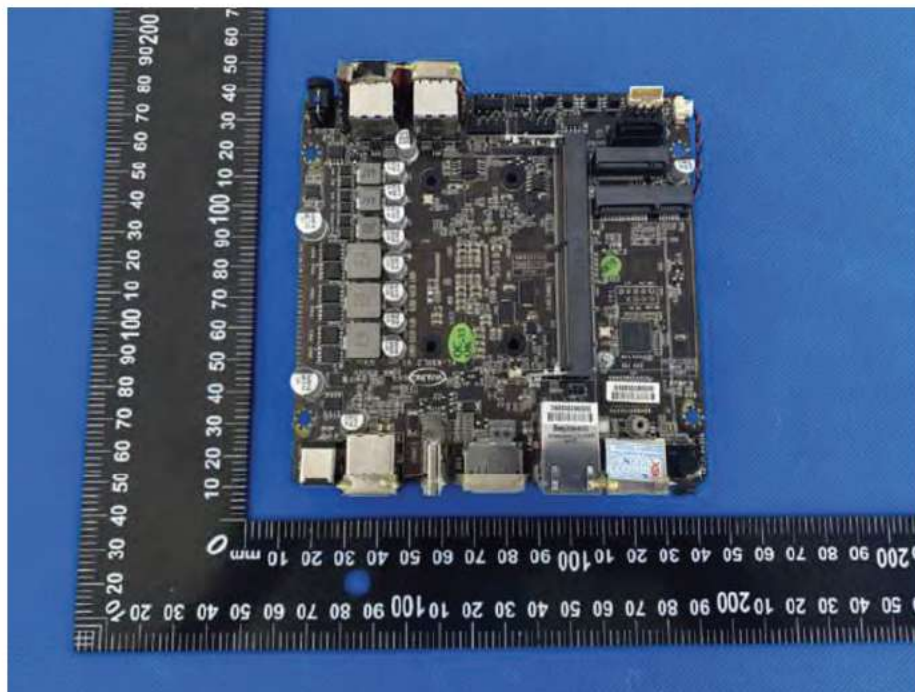
EUT Photo 4



EUT Photo 5



EUT Photo 6



12. EUT Test Setup Photographs

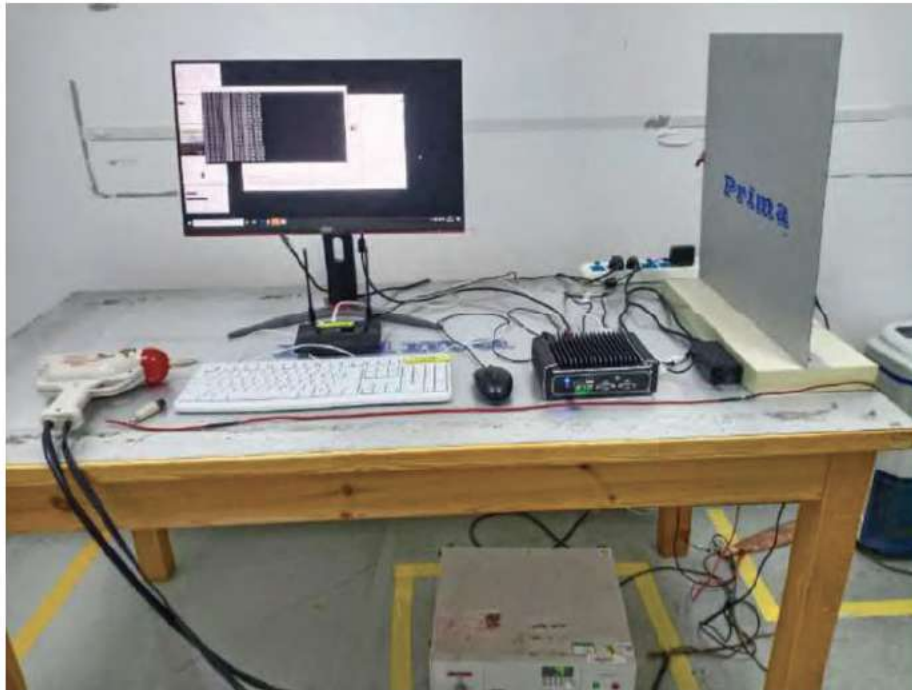
TELE



Radiated emissions



ESD



RS



STATEMENT

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL: 400-788-9558

P.C.: 518103

FAX: 0755-33229357

Website: <http://www.chnbctc.com>

E-Mail: bctc@bctc-lab.com.cn

***** END *****



NSAI

ECE TYPE-APPROVAL CERTIFICATE

E24

Concerning:²

Approval granted
~~Approval extended~~
~~Approval refused~~
~~Approval withdrawn~~
~~Production definitively discontinued~~

Of a type of ~~vehicle~~/component/~~separate technical unit~~² with regard to Regulation No. 10.
Of a type of electrical/electronic sub-assembly² with regard to Regulation No.10.

Approval No: **E24*10R06/02*5666*00**

Reason for extension:

-N/A

1. Make (trade name of manufacturer):

Telpo

2. Type and general commercial description:

T10
Ticket Validator

3. Means of identification of type, if marked on the ~~vehicle~~/
component/~~separate technical unit~~²:

T10

3.1 Location of that marking:

Label affixed to the housing

4. Category of vehicle:

N/A

5. Name and address of manufacturer:

***Telepower Communication Co., Ltd. Unit
504/502, 5/F/ Unit 203/201, 2/F, Building
5, Zone A, Hantian Science & Technology
Park, No.17 Shenhai Road, Guicheng
Street, Nanhai District, Foshan City,
Guangdong Province, China (Domicile
Declaration)***


6. In the case of components and separate technical units,
location and method of affixing of the approval mark:

Label affixed to the housing

7. Address(es) of assembly plant(s):

***Telepower Communication Co., Ltd. Unit
203/201, 2/F, Building 5, Zone A,
Hantian Science & Technology Park,
No.17 Shenhai Road, Guicheng Street,
Nanhai District, Foshan City, Guangdong
Province, China***

Approval No: E24*10R06/02*5666*00

8. Additional information (where applicable): *See appendix below*
9. Technical service responsible for carrying out the tests: *TÜV NORD Mobilität GmbH & Co. KG
IFM-Institut für Fahrzeugtechnik und
Mobilität Schönscheidtstr. 28,
D-45307 Essen*
10. Date of test report: *17.04.2024*
11. Number of test report: *CS010-A0-2024-01508*
12. Remarks (if any): *See Appendix below*
13. Place: *Dublin*
14. Date: *2nd May, 2024*
15. Signature: 
16. The index to the information package lodged with the approval authority, which may be obtained on Request, is attached.



-
1. Distinguishing number of the country which issued/extended/refused or withdrawn approval.
(see Regulation, provisions on approval).
2. Strike out what does not apply.

Appendix

To type-approval communication concerning the type approval of an electrical/electronic sub-assembly under Regulation No.10.

1. Additional information
 - 1.1. Electrical system rated voltage: **DC 12V and 24V, negative ground**
 - 1.2. This ESA can be used on any vehicle type with the following restrictions: **See manufacturer's specifications.**
 - 1.2.1 Installation conditions, if any: **See manufacturer's specifications.**
 - 1.3. This ESA can only be used on the following vehicle types: **N/A**
 - 1.3.1 Installation conditions, if any: **N/A**
 - 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were:

Bulk Current Injection Method:
Frequency: (20 – 400 MHz)
Free field testing method:
Frequency: (400 – 2000 MHz)
 - 1.5. Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: **TÜV NORD Mobilität GmbH & Co. KG**
2. Remarks: **N/A**

Appendix to type-approval communication concerning the type approval of a vehicle under Regulation No.10.

1. Additional information
2. Electrical system rated voltage: **N/A**
3. Type of bodywork: **N/A**
4. List of electronic systems installed in the tested vehicle(s) not limited to the items in the information document: **N/A**
 - 4.1. Vehicle equipped with 24 GHz short-range radar equipment (yes/no/optional)²: **N/A**
5. Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: **N/A**
6. Remarks: **N/A**



Approval No: **E24*10R06/02*5666*00**

Index to the Information Package

Date of issue:	<i>2nd May, 2024</i>
Date of latest amendment:	<i>N/A</i>
Reason for extension/revision:	<i>N/A</i>
1. Additional conditions, and advisory notes on legal alternatives.	
2. Test report(s)	
- numbers(s):	<i>CS010-A0-2024-01508</i>
- date of issue:	<i>17.04.2024</i>
- date of latest amendment:	<i>N/A</i>
3. Information document	
- number(s):	<i>R10-T10-00</i>
- date of issue:	<i>01.04.2024</i>
- date of latest amendment:	<i>N/A</i>
Documentation:	<i>47 pages</i>



Approval No: E24*10R06/02*5666*00

Appendix: **Additional conditions, and advisory notes on legal alternatives**

A: Additional conditions:

1. The attached technical report, with any of its attachments, forms part of this Type Approval certificate.
2. Each device from series production shall be to the measurements specified in the attached drawings, and shall be manufactured only from the materials specified in the Approval documents.
3. Changes in the type are permitted only with the explicit permission of NSAI. Breaches of this requirement will lead to a withdrawal of the Type Approval, and in addition may be subject to criminal prosecution.
4. At regular intervals, any tests or associated checks prescribed by the applicable legislation to verify continued conformity with the approved type shall be carried out. The manufacturer shall demonstrate compliance with this by submitting to NSAI evidence of adequate arrangements and documented control plans for each type approved.
5. Any set of samples or test pieces showing evidence of non-conformity shall give rise to further sampling and testing and all steps shall be taken to restore conformity of production.
6. This Type Approval will expire when it is surrendered by the holder, or withdrawn by NSAI, or when the approved type no longer conforms to legal requirements. The recall of the Type Approval can be issued by NSAI when the conditions required for the issuing or continuation of the Type Approval are no longer current, or when the Approval holder is in breach of the duties attached to the Type Approval, or when it is established that the approved type no longer meets the requirements of traffic safety.
7. Changes in the company name, address or manufacturing site, as well as in any of the sales or other agents specified in the issuing of the approval must immediately be notified to NSAI.
8. The duties imposed by the issuing of this certificate are not transferable. The legal protection of third parties is not affected by this certificate.
9. When the manufacture or sale of the system, component or separate technical unit has not been started within one year of the date of issue of this certificate, then NSAI is to be informed. This requirement also applies when the manufacture or sale has been halted for more than one year, or when it ought to have been halted for more than one year. The initial commencement of manufacture or sale, or the resumption of manufacture or sale, shall then be notified to NSAI within one month of commencement or resumption.

B: Legal Options:

Any objection to the requirements set out in this certificate shall be made within one month of the date of issue. The objection shall be made, in writing, to NSAI in Dublin.

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

Test Report

Agreement concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO ELECTROMAGNETIC COMPATIBILITY

ECE-R10

including all amendments up to

**Revision 6, Supplement 2 to the 06 series of
amendments**

Structure of report:

0. General information
1. Test object(s)
2. Test minutes
3. Remarks concerning tested object(s)
4. Appendices
5. Statement of conformity

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

0. General information

- 0.1. Make (trade name of the manufacturer) : Telpo
- 0.2. Type and general commercial description(s) : T10
- commercial description(s) : Ticket Validator
- version(s) : N/A
- 0.3. Name and address of the manufacturer : Telepower Communication Co., Ltd.
- Unit 504/502, 5/F/ Unit 203/201, 2/F, Building 5,
Zone A, Hantian Science & Technology Park,
No.17 Shenhai Road, Guicheng Street, Nanhai
District, Foshan City, Guangdong Province,
China (Domicile Declaration)
- 0.4. In the case of components and separate technical units, location and method of affixing of the approval mark : Label affixed on the housing
- 0.5. Address(es) of assembly plant(s) : Telepower Communication Co., Ltd.
- Unit 203/201, 2/F, Building 5, Zone A, Hantian
Science & Technology Park, No.17 Shenhai
Road, Guicheng Street, Nanhai District, Foshan
City, Guangdong Province, China
- 0.6. This ESA shall be approved as a : Component
- 0.7. Any restrictions of use and conditions for fitting : No restriction

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

1. Test object(s)

- 1.1. Test object(s) : ~~motor vehicle~~ / Component/ ~~separate technical unit~~
- 1.2. Version : T10
- 1.3. Worst case : All the main parts and accessories were electrical connected
- 1.4. Test date : March 22~29, 2024
- 1.5. Test site : EMTEK (Shenzhen) Co., Ltd.

Bldg. 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China
- 1.6. Remark : The results of the test refer exclusively to the object(s) mentioned under point 1.2 of this report.

2. Test minutes

- 2.1. Test facilities : The test equipment used was in compliance with the requirements of the regulation.
- 2.2. Test results : Tests of immunity and radiated narrowband & broadband electromagnetic emission have been conducted and results refer to Appendix 1.

~~The actual measurement test of the ESA was not required. The test results of the previous test are still valid.~~
- 2.2.1. Markings : The approval mark is marked clearly legible and indelible on the housing
- 2.2.2. Conclusions : Pass

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

3. Remark concerning tested object(s) : All versions of the ESA(s) type as stated in the information document are covered with the tested ESA(s) version(s).

4. Appendices

0 List of modifications

1 Test minutes

Information folder : R10-T10-00

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

5. Statement of conformity

The type described in this test report and the appendices attached are in compliance with the test specification mentioned above.

The Test Report comprises pages 1 to 20.

The samples used, were representative in terms of the type to be approved.

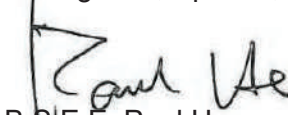
The Test Report shall be reproduced and published in full only and by the client only. It shall be reproduced partially with the written permission of the Test Laboratory only.

TEST LABORATORY

TÜV NORD Mobilität GmbH & Co. KG
IFM - Institut für Fahrzeugtechnik und Mobilität,
Schönscheidtstr. 28,
D-45307 Essen

Designated Technical Service
Technical Service Number for NSAI: 115

Guangzhou, April 17, 2024


B.S.E.E. Paul He



Type : T10
Manufacturer : Telepower Communication Co., Ltd.

List of modifications

Appendix 0

More details for application of

Correction of : ---

Modification of : ---

Addition of : ---

Deletion of : ---

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

Test minutes

Appendix 1

Test object

Trade name : Telpo
Version(s) : T10
Identification No. : N/A
Electrical system rated voltage : DC 12V and 24V systems, negative grounded
This ESA can be used on any vehicle type : No restriction
with the following restrictions
Installation condition : Connected to battery

1. Radiated broadband & narrowband electromagnetic emissions

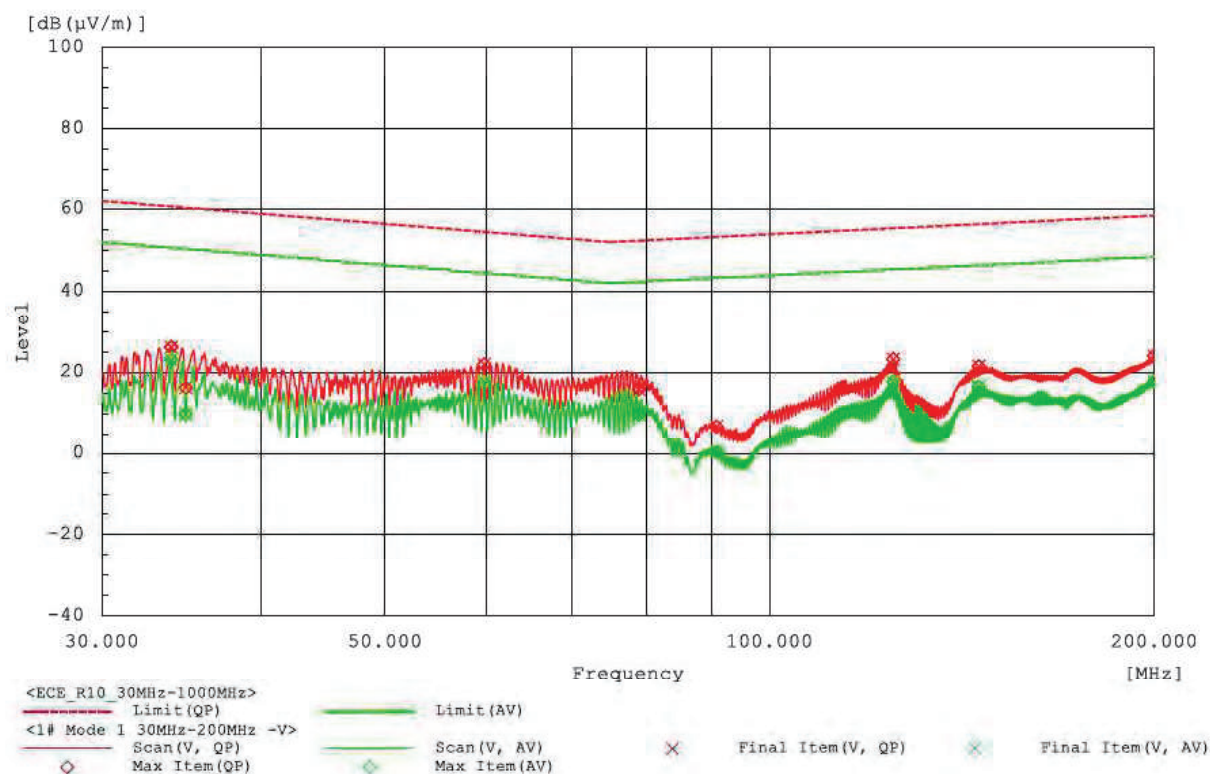
1.1. Test condition

Test method : According to ECE R10.06 Annex 7 and Annex 8
Test voltage : 13.5V and 27V
Operation mode : Working on
Frequency range : 30MHz – 1000MHz
Detector type : Quasi-peak and Average
Bandwidth : 120kHz
Antenna height : 1000mm
Distance between antenna and the ESA wiring : 1000mm
harness
The length of the ESA harness parallel to the : 1500mm
front edge of the ground plane
The height of the ground plane above floor : 900mm
The height of ESA harness above the ground : 50mm
plane

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

1.2 Peak and average value scan graph (Vertical) _12V system

30MHz - 200MHz

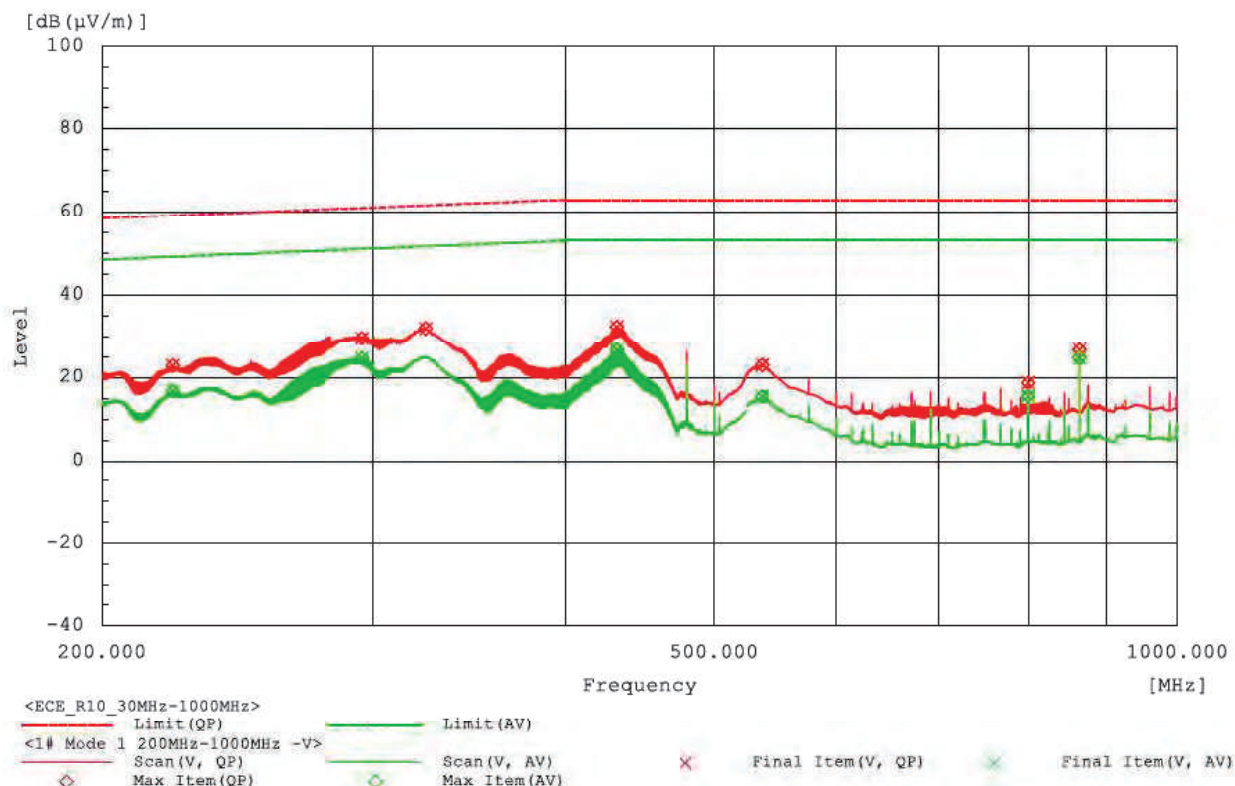


Final Data List

Frequency MHz	Pol	Reading dB(μV)			Factor dB(1/m)	Level dB(μV/m)			Limit dB(μV/m)			Margin dB		
		QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK
34.000	V	40.4	37.4		-14.3	26.1	23.1		60.6	50.6		34.5	27.5	
34.900	V	30.4	24.0		-14.1	16.3	9.9		60.3	50.3		44.0	40.4	
59.760	V	37.1	32.8		-15.2	21.9	17.6		54.5	44.5		32.6	26.9	
79.020	V	31.2	25.1		-15.3	15.9	9.8		52.3	42.3		36.4	32.5	
90.890	V	23.0	16.6		-16.2	6.8	0.4		53.3	43.3		46.5	42.9	
124.930	V	38.3	32.8		-15.1	23.2	17.7		55.4	45.4		32.2	27.7	
145.810	V	35.0	30.0		-13.5	21.5	16.5		56.4	46.4		34.9	29.9	
199.910	V	35.2	29.0		-11.2	24.0	17.8		58.4	48.4		34.4	30.6	

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

200MHz – 1000MHz



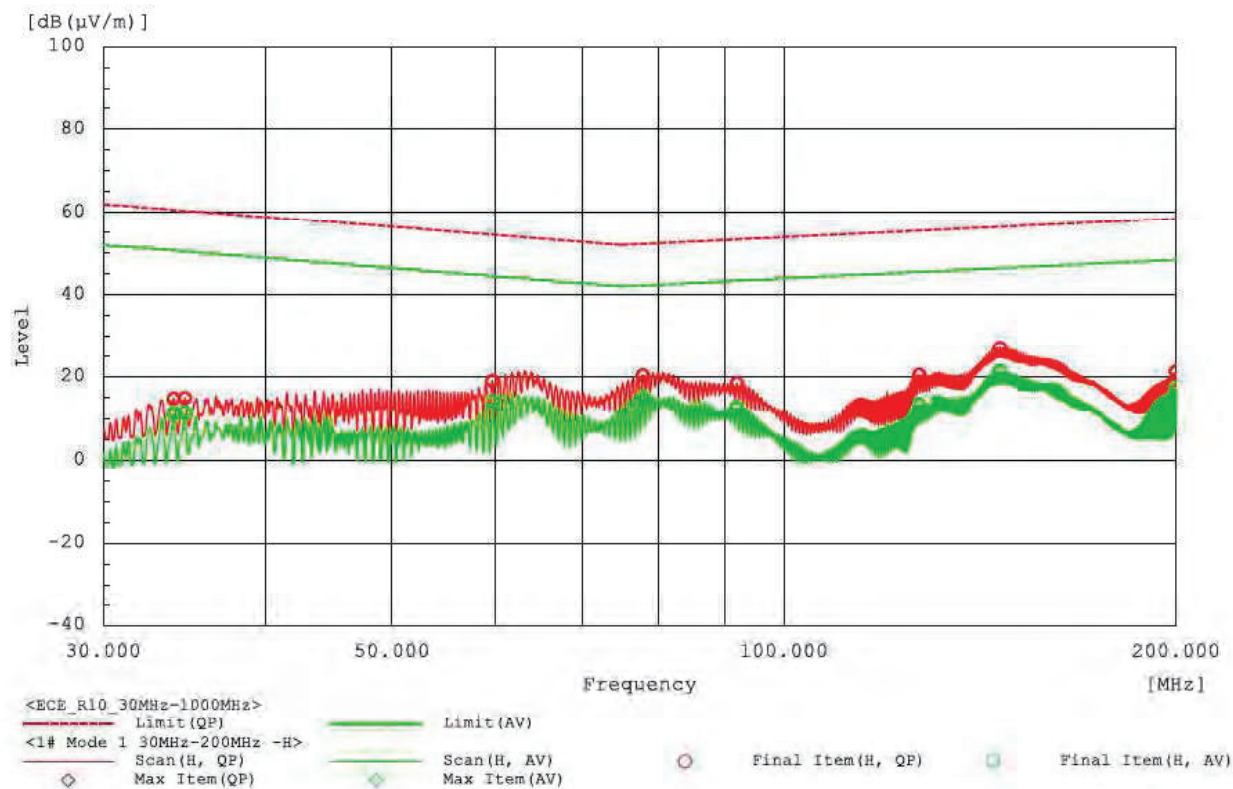
Final Data List

Frequency	Pol	Reading			Factor	Level			Limit			Margin		
MHz		dB(μV)			dB(1/m)	dB(μV/m)			dB(μV/m)			dB		
		QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK
222.410	V	36.4	30.2		-13.5	22.9	16.7		59.1	49.1		36.2	32.4	
295.170	V	41.7	36.8		-12.2	29.5	24.6		61.0	51.0		31.5	26.4	
324.870	V	43.8			-11.9	31.9			61.6			29.7		
432.280	V	42.4	36.7		-10.1	32.3	26.6		63.0	53.0		30.7	26.4	
537.570	V	31.5	23.9		-8.5	23.0	15.4		63.0	53.0		40.0	37.6	
799.990	V	24.3	21.1		-5.6	18.7	15.5		63.0	53.0		44.3	37.5	
864.010	V	31.8	29.7		-5.1	26.7	24.6		63.0	53.0		36.3	28.4	

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

1.3 Peak and Average value scan graph (Horizontal) _12V system

30MHz – 200MHz

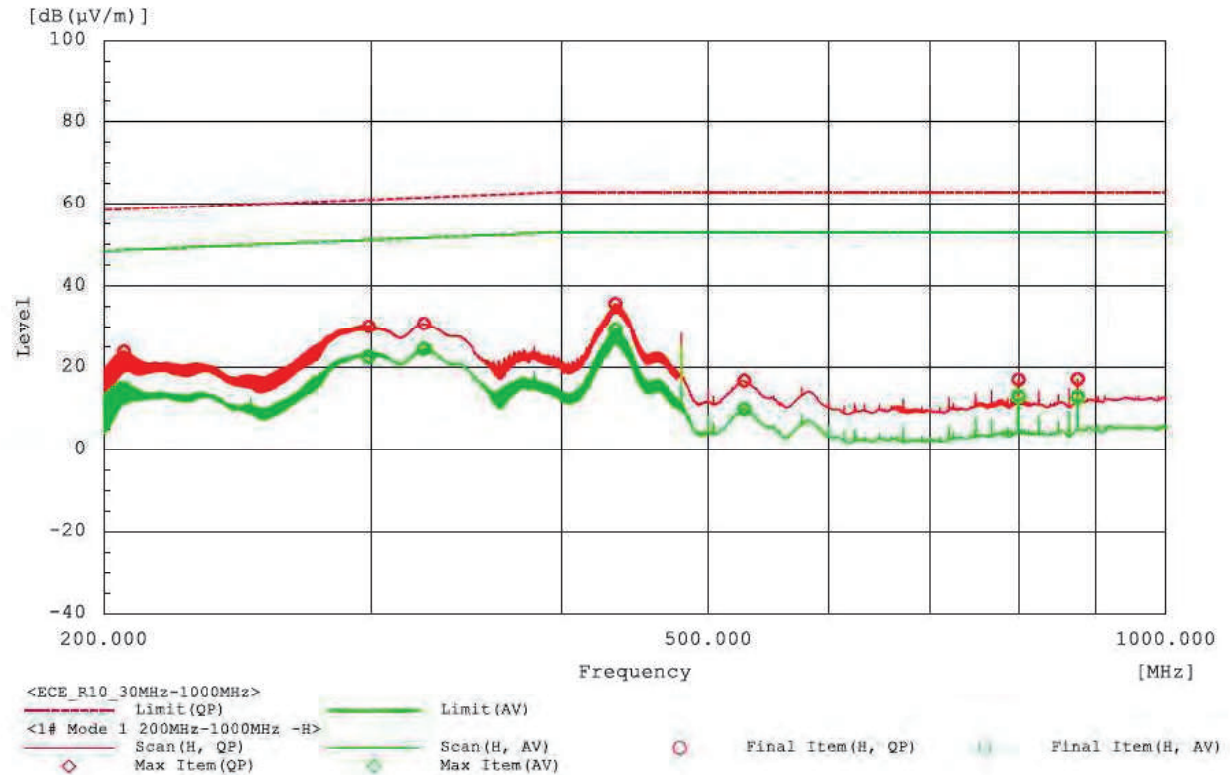


Final Data List

Frequency	Pol	Reading			Factor	Level			Limit			Margin		
MHz		dB(μV)			dB(1/m)	dB(μV/m)			dB(μV/m)			dB		
		QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK
33.990	H	29.0	25.6		-14.3	14.7	11.3		60.6	50.6		45.9	39.3	
34.660	H	29.1	25.6		-14.2	14.9	11.4		60.4	50.4		45.5	39.0	
59.700	H	34.2	29.3		-15.2	19.0	14.1		54.5	44.5		35.5	30.4	
77.910	H	35.7	30.6		-15.3	20.4	15.3		52.3	42.3		31.9	27.0	
92.000	H	34.6	28.8		-16.1	18.5	12.7		53.3	43.3		34.8	30.6	
127.000	H	35.5	28.4		-15.0	20.5	13.4		55.5	45.5		35.0	32.1	
146.530	H	40.7	34.9		-13.5	27.2	21.4		56.4	46.4		29.2	25.0	
199.910	H	32.5	28.6		-11.2	21.3	17.4		58.4	48.4		37.1	31.0	

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

200MHz -1000MHz



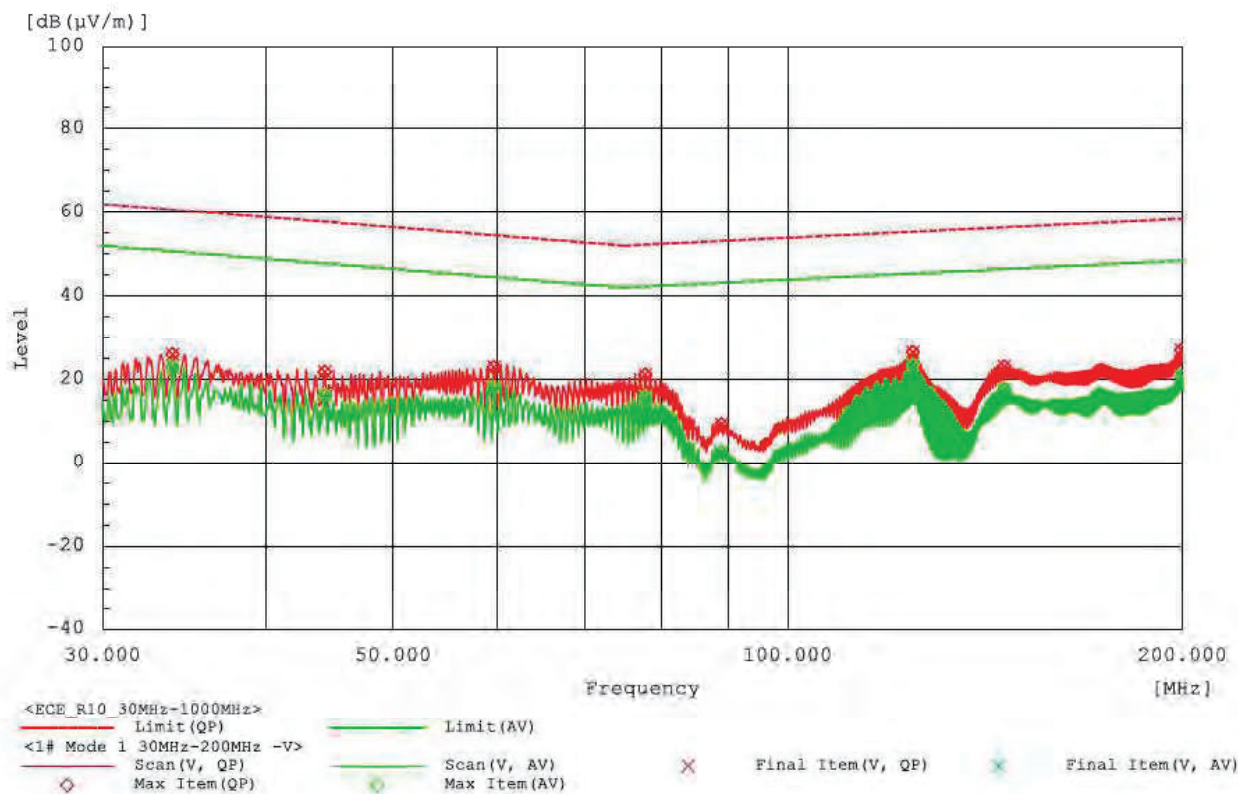
Final Data List

Frequency	Pol	Reading			Factor	Level			Limit			Margin		
MHz		dB(μV)			dB(1/m)	dB(μV/m)			dB(μV/m)			dB		
		QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK
206.240	H	37.4	26.4		-13.5	23.9	12.9		58.6	48.6		34.7	33.7	
298.830	H	42.4	34.9		-12.3	30.1	22.6		61.1	51.1		31.0	28.5	
324.960	H	42.7	36.4		-11.9	30.8	24.5		61.6	51.6		30.8	27.1	
434.350	H	45.8	39.5		-10.1	35.7	29.4		63.0	53.0		27.3	23.6	
528.000	H	25.6	18.7		-8.8	16.8	9.9		63.0	53.0		46.2	43.1	
799.990	H	22.6	18.6		-5.6	17.0	13.0		63.0	53.0		46.0	40.0	
874.990	H	21.9	17.6		-4.8	17.1	12.8		63.0	53.0		45.9	40.2	

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

1.4 Peak and average value scan graph (Vertical) _24V system

30MHz - 200MHz

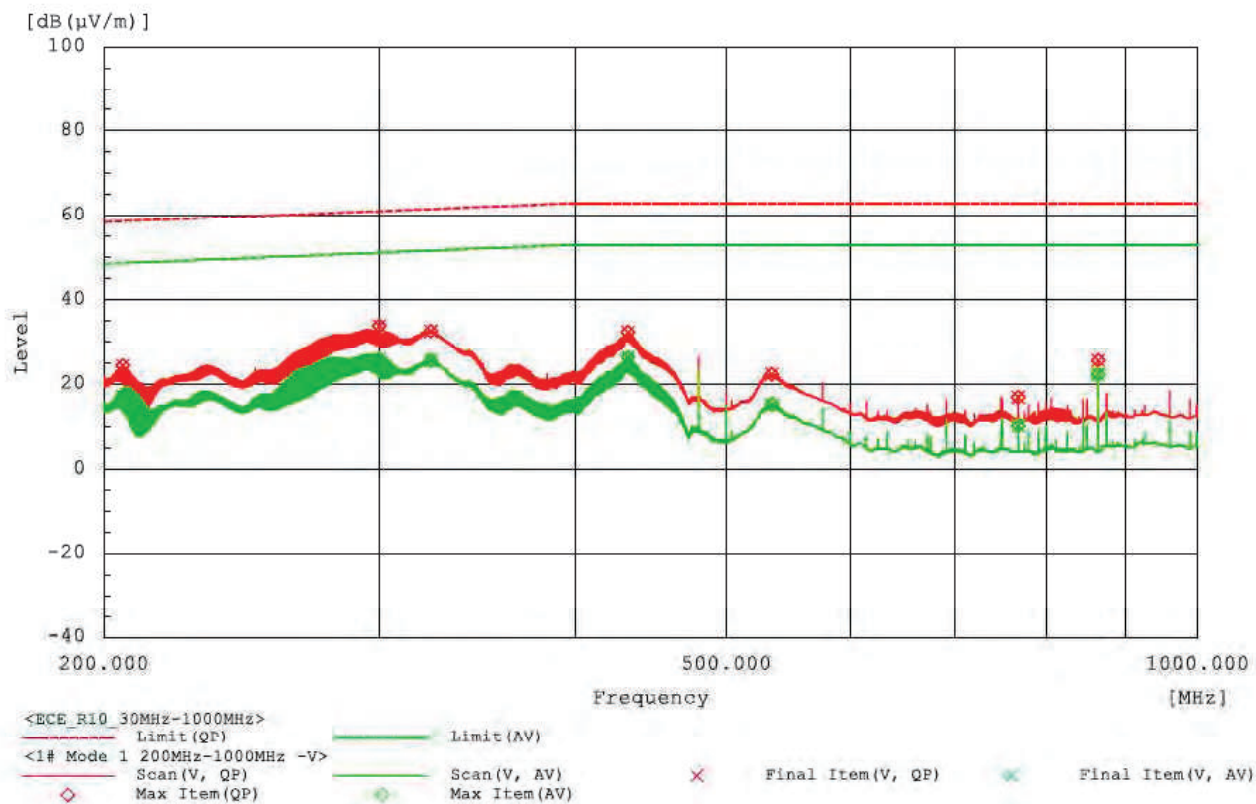


Final Data List

Frequency	Pol	Reading			Factor	Level			Limit			Margin		
MHz		dB(μV)			dB(1/m)	dB(μV/m)			dB(μV/m)			dB		
		QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK
33.930	V	40.3	37.2		-14.3	26.0	22.9		60.7	50.7		34.7	27.8	
44.320	V	36.1	30.4		-14.3	21.8	16.1		57.7	47.7		35.9	31.6	
59.670	V	38.1	33.2		-15.2	22.9	18.0		54.5	44.5		31.6	26.5	
77.820	V	36.4	31.2		-15.3	21.1	15.9		52.2	42.2		31.1	26.3	
89.000	V	25.5	18.7		-16.2	9.3	2.5		53.1	43.1		43.8	40.6	
124.570	V	41.7	38.7		-15.2	26.5	23.5		55.3	45.3		28.8	21.8	
146.230	V	36.6	31.1		-13.5	23.1	17.6		56.4	46.4		33.3	28.8	
199.640	V	38.3	32.0		-11.3	27.0	20.7		58.4	48.4		31.4	27.7	

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

200MHz – 1000MHz



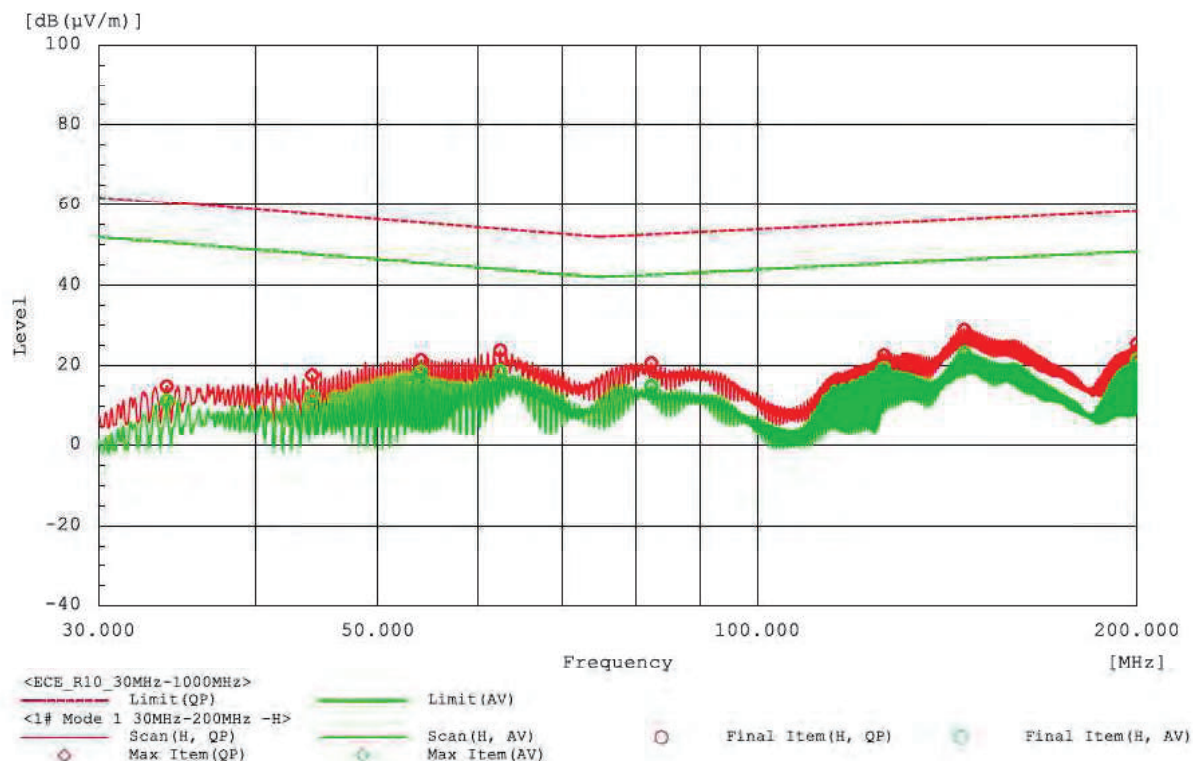
Final Data List

Frequency	Pol	Reading			Factor	Level			Limit			Margin		
MHz		dB(μV)			dB(1/m)	dB(μV/m)			dB(μV/m)			dB		
		QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK
205.670	V	37.9	30.7		-13.5	24.4	17.2		58.6	48.6		34.2	31.4	
299.970	V	46.1	38.3		-12.3	33.8	26.0		61.1	51.1		27.3	25.1	
323.610	V	44.5	37.5		-11.9	32.6	25.6		61.6	51.6		29.0	26.0	
432.550	V	42.4	36.5		-10.1	32.3	26.4		63.0	53.0		30.7	26.6	
534.540	V	31.0	23.8		-8.6	22.4	15.2		63.0	53.0		40.6	37.8	
767.980	V	22.7	16.0		-5.8	16.9	10.2		63.0	53.0		46.1	42.8	
864.010	V	30.7	27.4		-5.1	25.6	22.3		63.0	53.0		37.4	30.7	

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

1.5 Peak and Average value scan graph (Horizontal) _24V system

30MHz – 200MHz

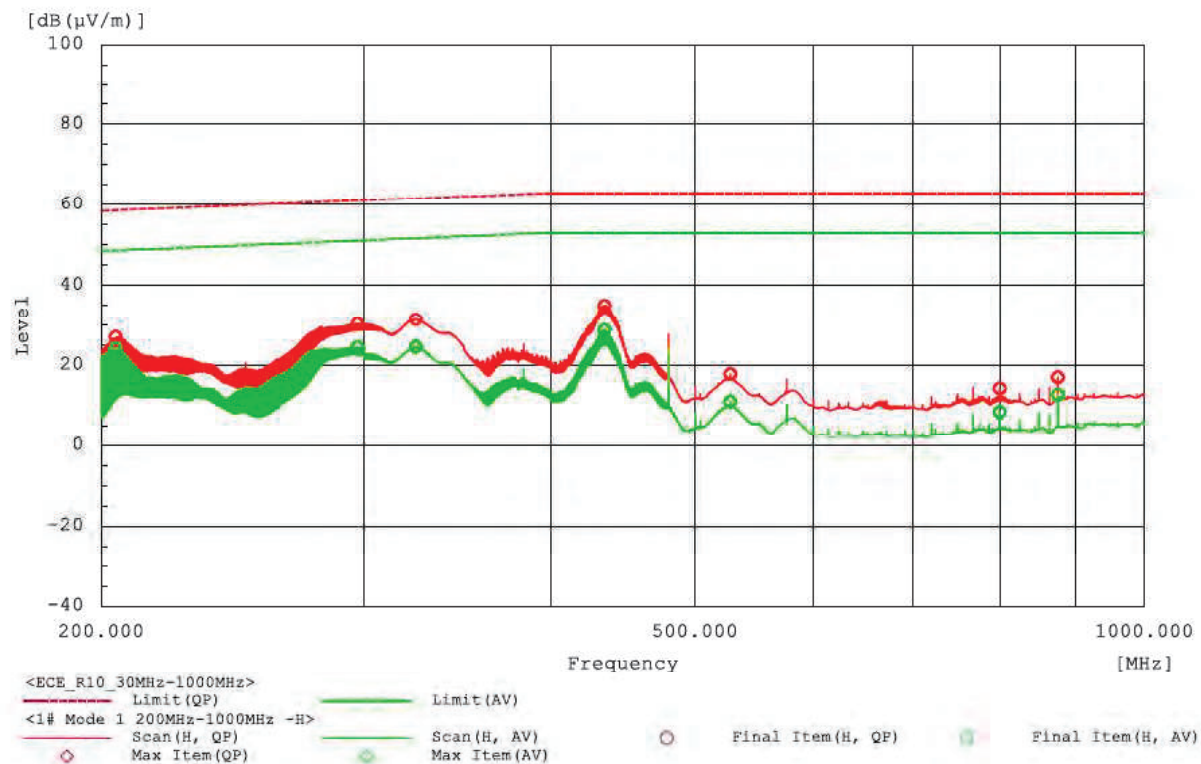


Final Data List

Frequency MHz	Pol	Reading			Factor dB(1/m)	Level			Limit			Margin		
		dB(μV)				dB(μV/m)			dB(μV/m)			dB		
		QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK
33.990	H	29.2	25.7		-14.3	14.9	11.4		60.6	50.6		45.7	39.2	
44.320	H	31.9	26.8		-14.3	17.6	12.5		57.7	47.7		40.1	35.2	
54.090	H	36.8	34.0		-15.4	21.4	18.6		55.6	45.6		34.2	27.0	
62.490	H	39.2	33.9		-15.3	23.9	18.6		54.0	44.0		30.1	25.4	
82.370	H	36.0	30.4		-15.4	20.6	15.0		52.6	42.6		32.0	27.6	
126.010	H	37.7	34.6		-15.1	22.6	19.5		55.4	45.4		32.8	25.9	
145.870	H	42.4	36.7		-13.5	28.9	23.2		56.4	46.4		27.5	23.2	
200.000	H	36.6	32.8		-11.2	25.4	21.6		58.4	48.4		33.0	26.8	

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

200MHz -1000MHz



Final Data List

Frequency	Pol	Reading			Factor	Level			Limit			Margin		
MHz		dB(μV)			dB(1/m)	dB(μV/m)			dB(μV/m)			dB		
		QP	AV	PK		QP	AV	PK	QP	AV	PK	QP	AV	PK
204.560	H	40.6	37.7		-13.5	27.1	24.2		58.6	48.6		31.5	24.4	
297.060	H	42.6	36.8		-12.3	30.3	24.5		61.0	51.0		30.7	26.5	
324.960	H	43.4	36.5		-11.9	31.5	24.6		61.6	51.6		30.1	27.0	
434.830	H	45.0	38.9		-10.1	34.9	28.8		63.0	53.0		28.1	24.2	
528.000	H	26.7	19.9		-8.8	17.9	11.1		63.0	53.0		45.1	41.9	
799.990	H	19.9	14.1		-5.6	14.3	8.5		63.0	53.0		48.7	44.5	
874.990	H	21.9	17.5		-4.8	17.1	12.7		63.0	53.0		45.9	40.3	

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

1.6 Test result

Broadband Emissions:

Frequency range	Detector type	Antenna polarity	Result
30MHz – 1000MHz	Quasi-peak	Horizontal & Vertical	Pass

Narrowband Emissions:

Frequency range	Detector type	Antenna polarity	Result
30MHz – 1000MHz	Average	Horizontal & Vertical	Pass

2. Conducted Transient emissions

Test method : ISO 7637-2 2nd edition: 2004
(According to ECE R10.06 Annex 10, paragraph 3.)

The ambient temperature : 23.6°C

Test voltage : 13.5V and 27V

Operation mode : Working on

Test condition : All wiring connections between artificial network, switch, and the ESA were spaced 50mm above the metal ground plane.
The ESA was placed on a non-conductive material 50mm above the ground plane.

Polarity of pulse amplitude	Maximum allowed value for vehicles with 12V systems	Maximum measured pulse amplitude true value (V)	Result
Positive	+75V	+0V	Pass
Negative	-100V	-13.5V	Pass

Polarity of pulse amplitude	Maximum allowed value for vehicles with 24V systems	Maximum measured pulse amplitude true value (V)	Result
Positive	+150V	+0V	Pass
Negative	-450V	-27.9V	Pass

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

3. Immunity to electromagnetic radiation

3.1 Bulk current injection testing

Test method : ISO 11452-4 4th edition: 2011
Bulk current injection testing method
(According to ECE R10.06 Annex 9 paragraph 4.3)

Test condition

The ambient temperature : 23.6°C

Test Voltage : 13.5V and 27V

Operation mode : Working on

Frequency range : 20MHz – 400MHz

The distance between the injection probe
and connector of the ESA : 150mm

The length of the test harness between
the ESA and the load : 1000mm

The height of ESA above the ground
plane : 50mm

The height of the ground plane above the
floor : 900mm

12V and 24V system

Frequency range (MHz)	Test level	Type of modulation	Test distance	Antenna position	Result
20 - 400	60mA	AM, 1KHz, 80%	150mm	/	Pass*

Remark: * – no degradation of performance of “immunity-related functions”

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

3.2 Absorber chamber test

Test method : ISO 11452-2 2nd edition: 2004
Free field testing method
(According to ECE R10.06 Annex 9 paragraph 4.1)

Test condition

The ambient temperature : 24.5°C

Test Voltage : 13.5V and 27V

Operation mode : Working on

Frequency range : 400MHz – 2000MHz

The distance between the ESA wiring harness and the antenna : 1000mm

The length of the ESA harness parallel to the front edge of the ground plane : 1500mm

The height of the ground plane above the floor : 900mm

The height of ESA above the ground plane : 50mm

The distance between the edge of the ground plane and test ESA harness : 100mm

12V and 24V system

Frequency range (MHz)	Test level	Type of modulation	Test distance	Antenna position	Result
400 - 800	30volts/m	AM, 1KHz, 80%	1 m	Vertical	Pass*
800 - 2000	30volts/m	PM, 577µs	1 m	Vertical	Pass*

Remark: * – no degradation of performance of “immunity-related functions”

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

4. Immunity to transient disturbances

Test method : ISO 7637-2 2nd edition: 2004
(According to ECE R10.06 Annex 10, paragraph 2.)

Test voltage : 13.5V and 27V

Operation mode : Working on

The ambient temperature : 23.5°C

Test condition : The leads between the terminals of the test pulse generator and the ESA were laid out in a straight parallel line at a height of 50mm above the ground plane and have a length of 50 mm.

12V System

Test pulse	Test level	Number of pulse / test time	Burst cycle / pulse repetition time	Required minimum function status**	Status of function true value**	Result
1	-75V	5000 pulses	0.5 s	C	C	Pass
2a	+37V	5000 pulses	0.5 s	B	A	Pass
2b	+10V	10 pulses	2 s	C	C	Pass
3a	-112V	1 h	90 ms	A	A	Pass
3b	+75V	1 h	90 ms	A	A	Pass
4	-6V	1 pulse	---	C	C	Pass

24V System

Test pulse	Test level	Number of pulse / test time	Burst cycle / pulse repetition time	Required minimum function status**	Status of function true value**	Result
1	-450V	5000 pulses	0.5 s	C	C	Pass
2a	+37V	5000 pulses	0.5 s	B	A	Pass
2b	+20V	10 pulses	2 s	C	C	Pass
3a	-150V	1 h	90 ms	A	A	Pass
3b	+150V	1 h	90 ms	A	A	Pass
4	-12V	1 pulse	---	C	C	Pass

Remark:

** - Class A: all functions of a device/system perform as designed during and after exposure to disturbance.

Class B: all functions of a device /system perform as designed during exposure. However, one or more of them can go beyond specified tolerance. All functions return automatically to within normal limits after exposure is removed. Memory functions shall remain class A.

Type : T10
Manufacturer : Telepower Communication Co., Ltd.

Class C: one or more functions of a device/system do not perform as designed during exposure but return automatically to normal operation after exposure is removed.

Class D: one or more functions of a device/system do not perform as designed during exposure and do not return to normal operation until exposure is removed and the device/system is reset by simple "operator/use" action.

5. Conclusions : Pass

PARTIAL MODEL INFORMATION DOCUMENT NO. R10-T10-00

**UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES
WITH REGARD TO ELECTROMAGNETIC COMPATIBILITY**

ECE-R10

Including all amendments up to

(Revision 6, Supplement 2 to the 06 series of amendments)

Type: T10

This model information document consists of page 1 to 27

**Information document for type approval of an ~~electrical~~/electronic sub-assembly
with respect to electromagnetic compatibility**

- 1 Make (trade name of the manufacturer) : Telpo
- 2 Type : T10
 - commercial description : Ticket Validator
 - version(s) or variant(s) (if applicable) : NA
 - Statement for model difference (if applicable) : NA
- 3 Means of identification of type, if marked on the component:¹ : T10
 - 3.1 Location of that marking : Label affixed to the housing
- 4 Name and address of the manufacturer : Telepower Communication Co., Ltd.

Unit 504/502, 5/F/ Unit 203/201, 2/F, Building 5, Zone A,
Hantian Science & Technology Park, No.17 Shenhai Road,
Guicheng Street, Nanhai District, Foshan City, Guangdong
Province, China (Domicile Declaration)

Name and address of authorized representative, if any : N/A
- 5 In the case of components and separate technical units, location and method of affixing of the approval mark : Label affixed to the housing
- 6 Address(es) of assembly plant(s) : Telepower Communication Co., Ltd.

Unit 203/201, 2/F, Building 5, Zone A, Hantian Science & Technology Park, No.17 Shenhai Road, Guicheng Street, Nanhai District, Foshan City, Guangdong Province, China
- 7 This ESA shall be approved as a : Component /~~STU~~
- 8 Any restrictions of use and conditions for fitting : No restriction
- 9 Electrical system rated voltage : DC 12V and 24V system, ~~positive~~/negative² ground

Appendix 1: : See below *List of attachments*

Description of the ESA chosen to represent the type (electronic block diagram and list of main component constituting the ESA (e.g. make and type of microprocessor, crystal, etc.).

Only applicable for charging systems

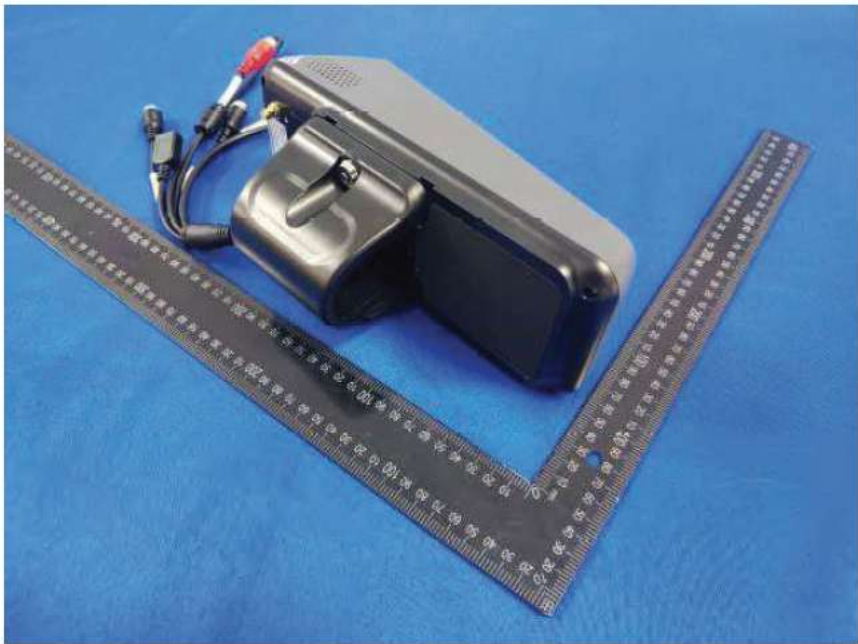
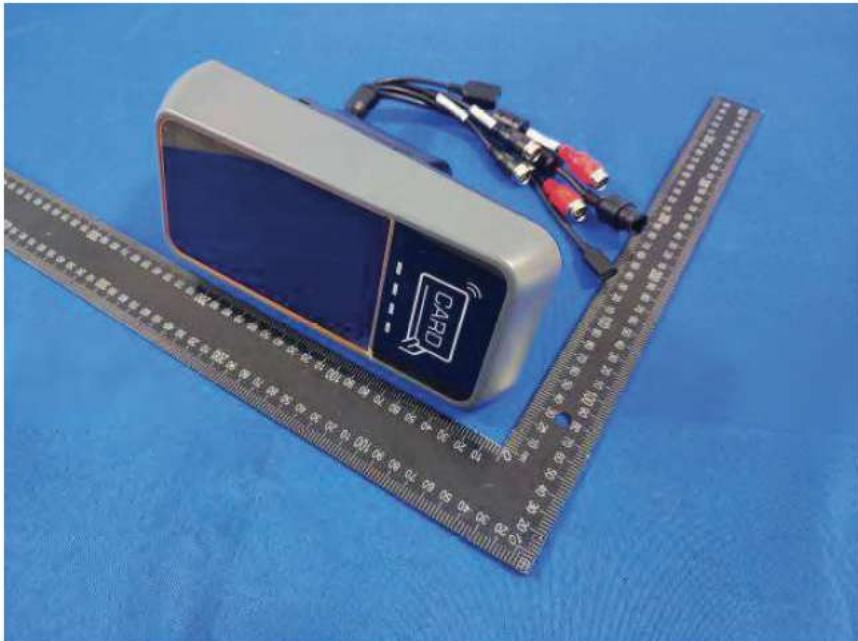
- | | | |
|----|---|-------|
| 10 | Charger: on board/external ² | : N/A |
| 11 | Charging current:
direct current/alternating current
(number of phases/frequency) | : N/A |
| 12 | Maximal nominal current (in each mode if necessary) | : N/A |
| 13 | Nominal charging voltage | : N/A |
| 14 | Basic ESA interface functions:
ex. L1/L2/L3/N/PE/control pilot | : N/A |
| 15 | Minimum Rsce value (see paragraph 7.11. of this Regulation) | : N/A |

¹⁾ If the means of identification of type contains characters not relevant to describe the component or separate technical unit types covered by this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC??123??).

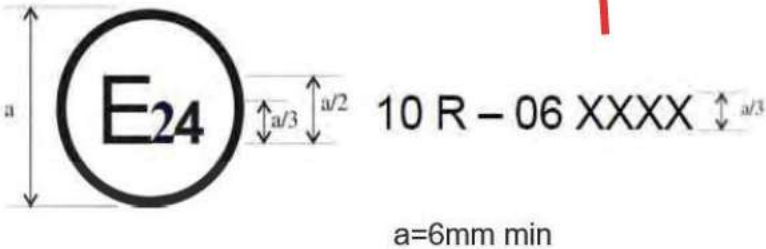
²⁾ Delete where not applicable.

List of attachments:

Annex	Subject	Page
A	Assembly	4
B	Label	5
C	Constructed Profile	6
D	Circuit Diagram	7~19
E	PCB Layout	20~22
F	Bill of materials	23~27

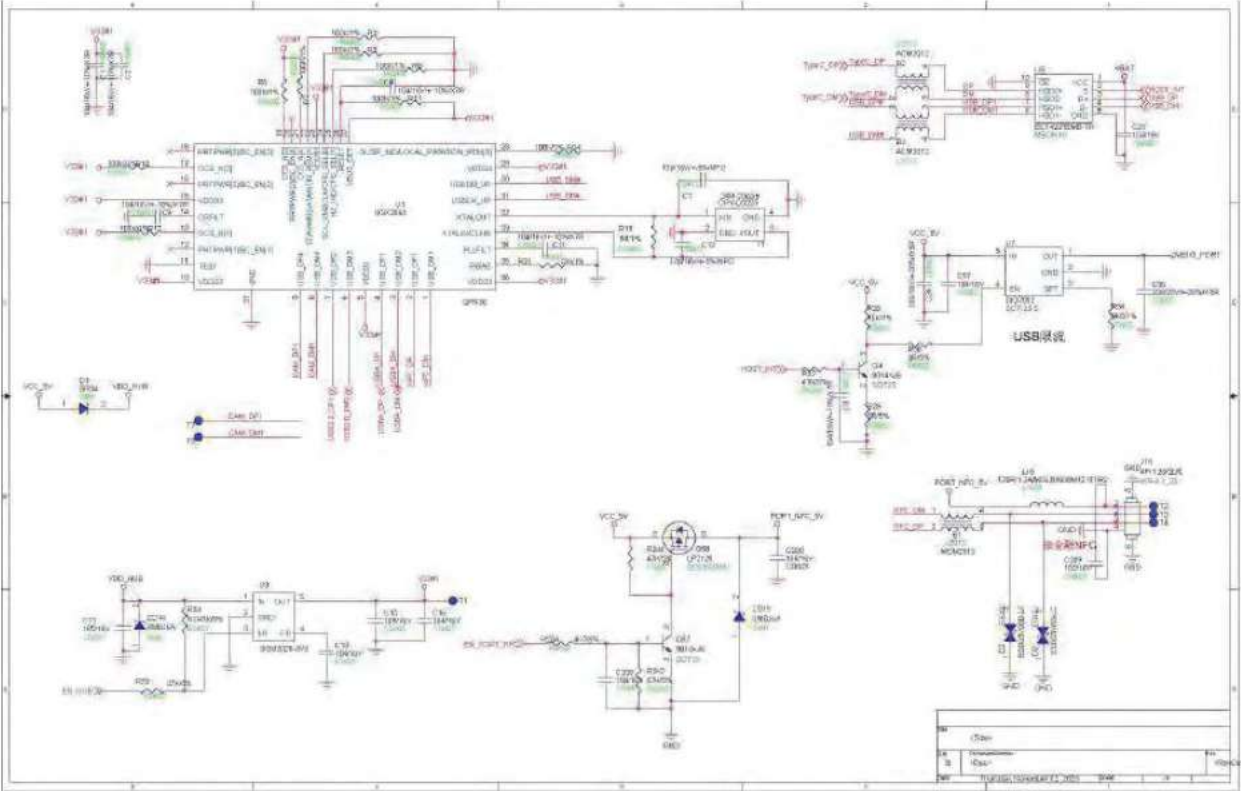


DRW.	Annex A	Assembly
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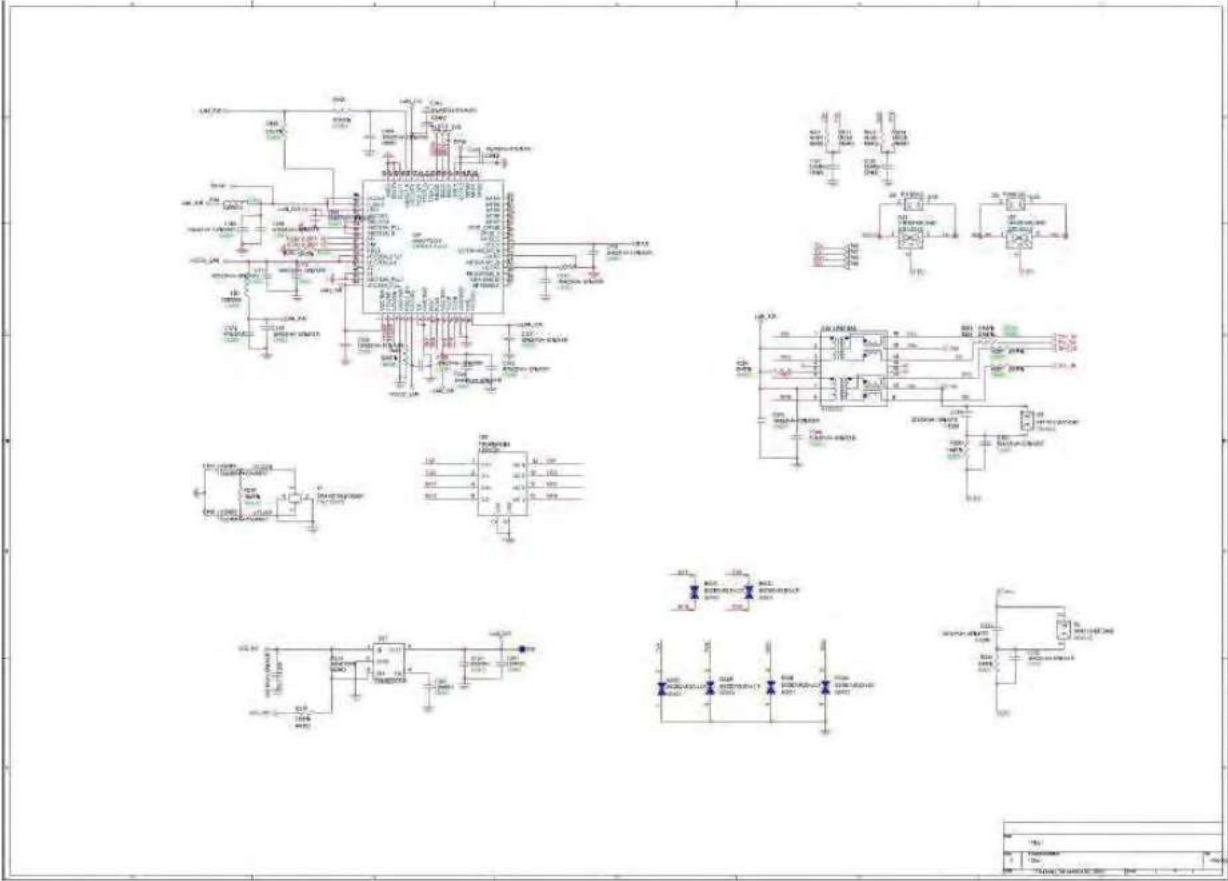


DRW.	Annex B	Label
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DRW.	Annex D	Circuit Diagram
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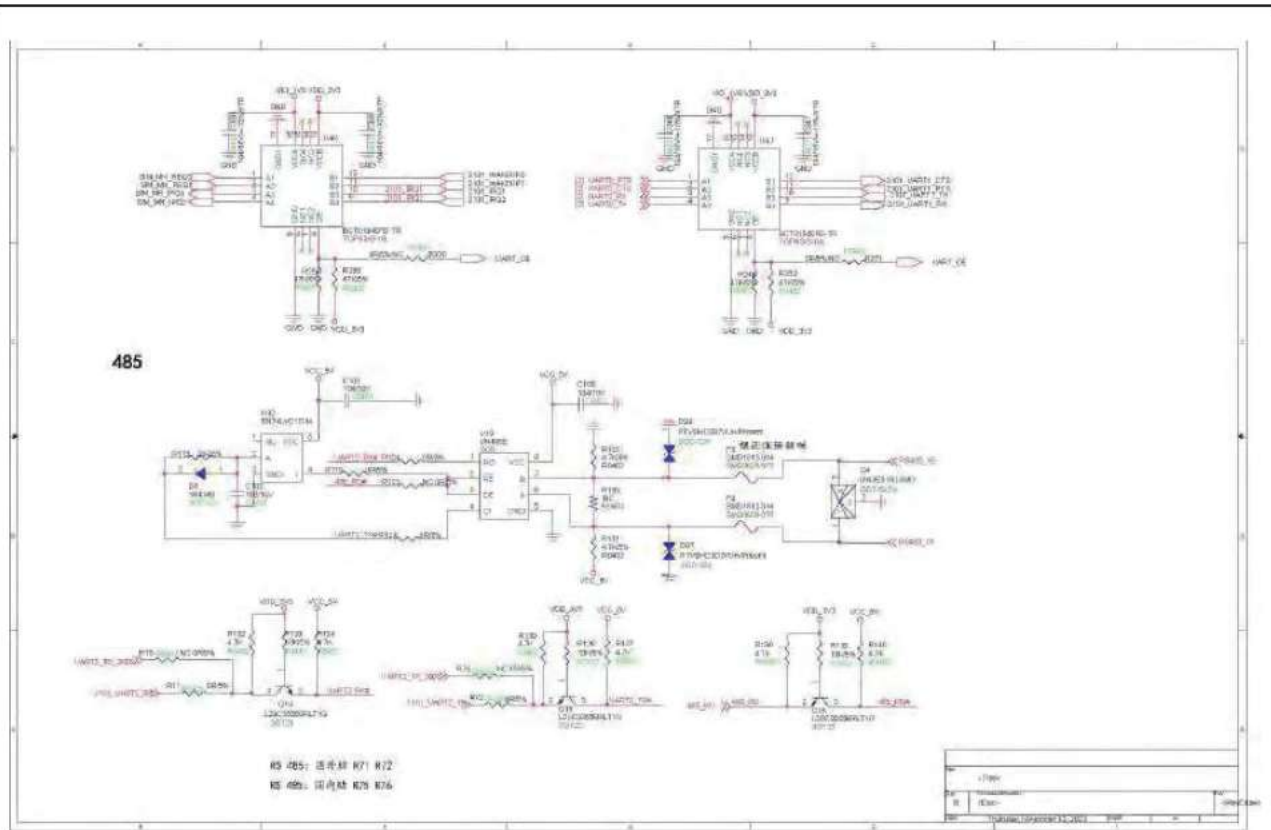
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Annex D

Circuit Diagram

Type: T10

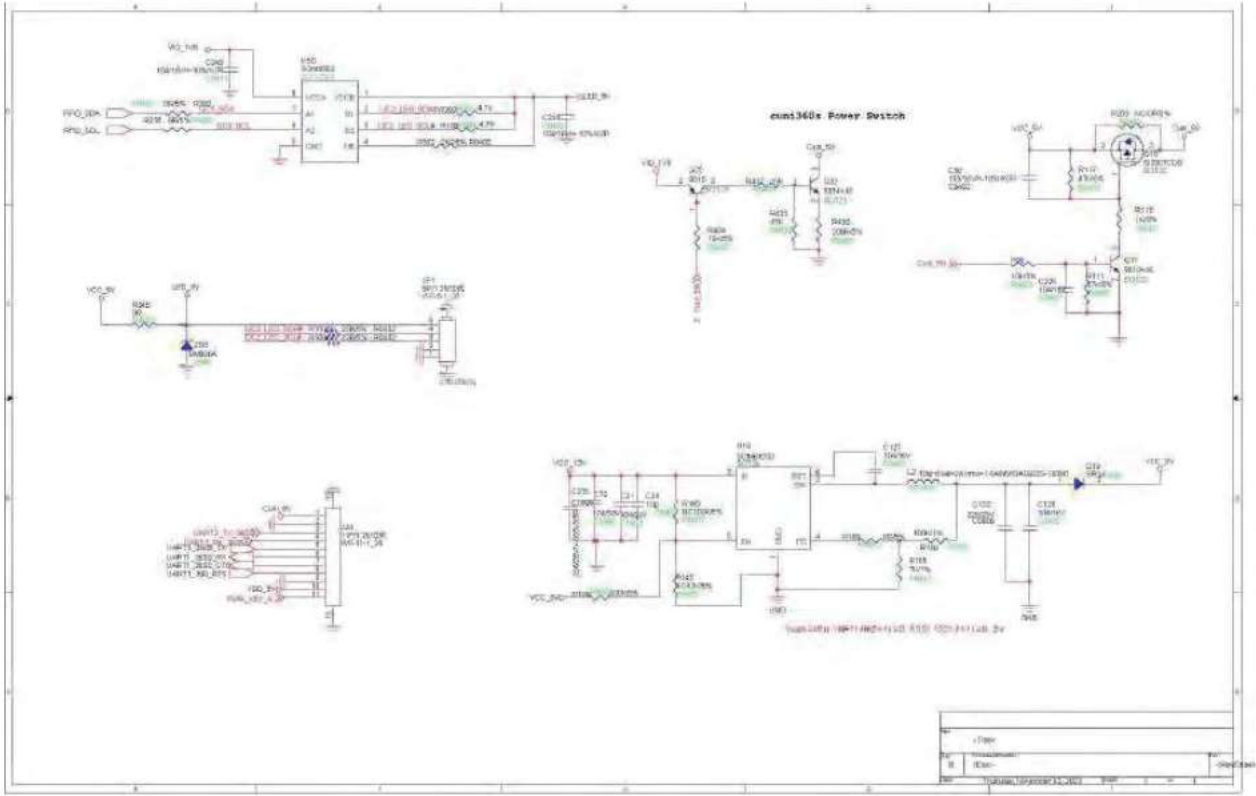
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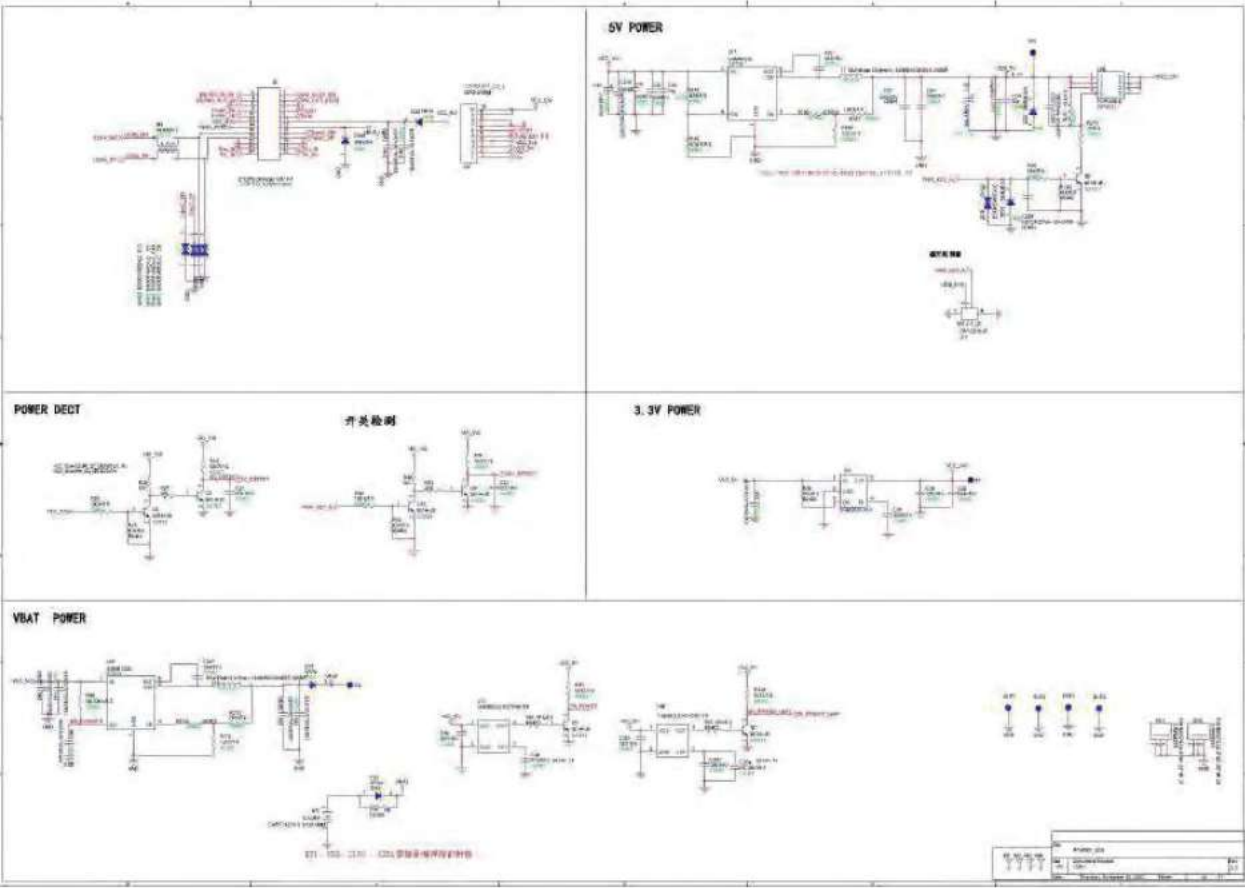


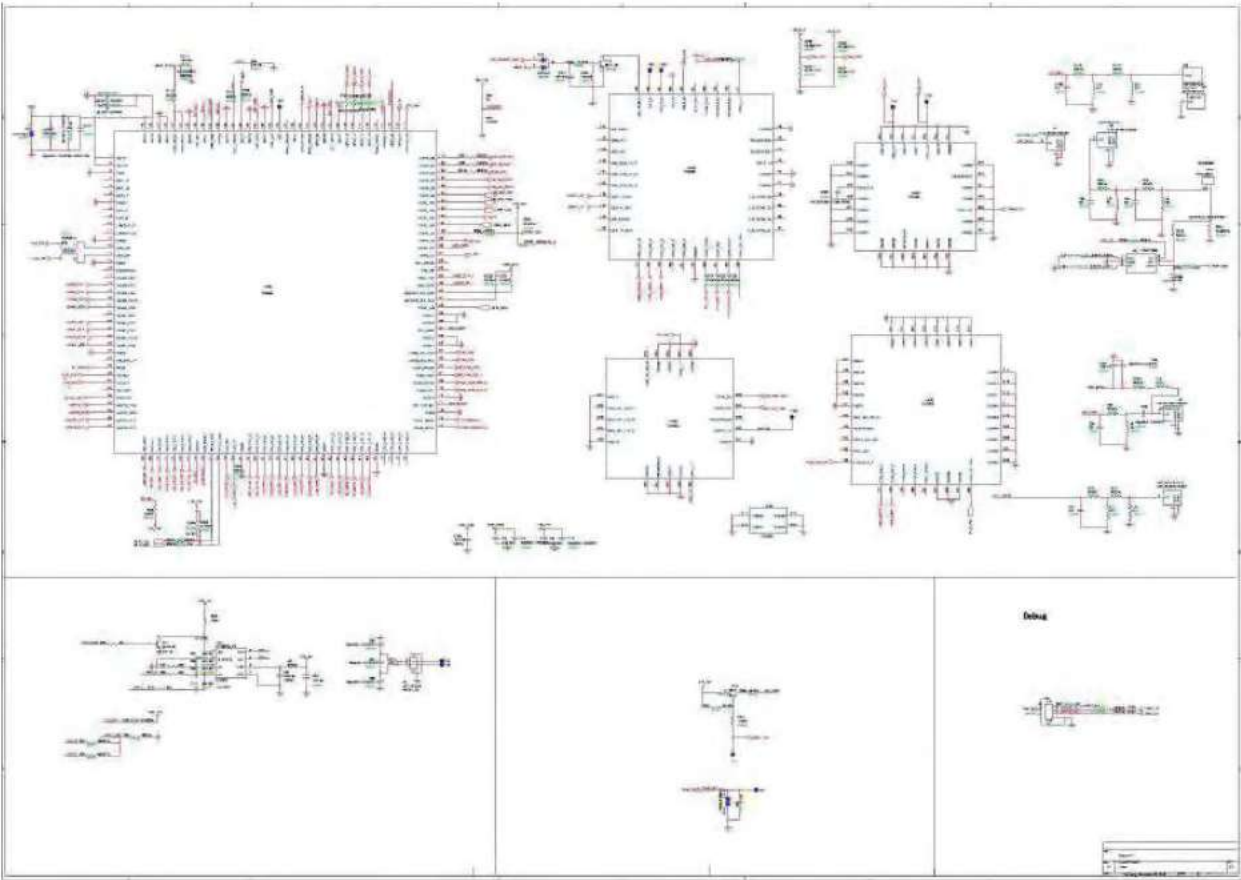
DRW.

Annex D

Circuit Diagram



		
DRW.	Annex D	Circuit Diagram



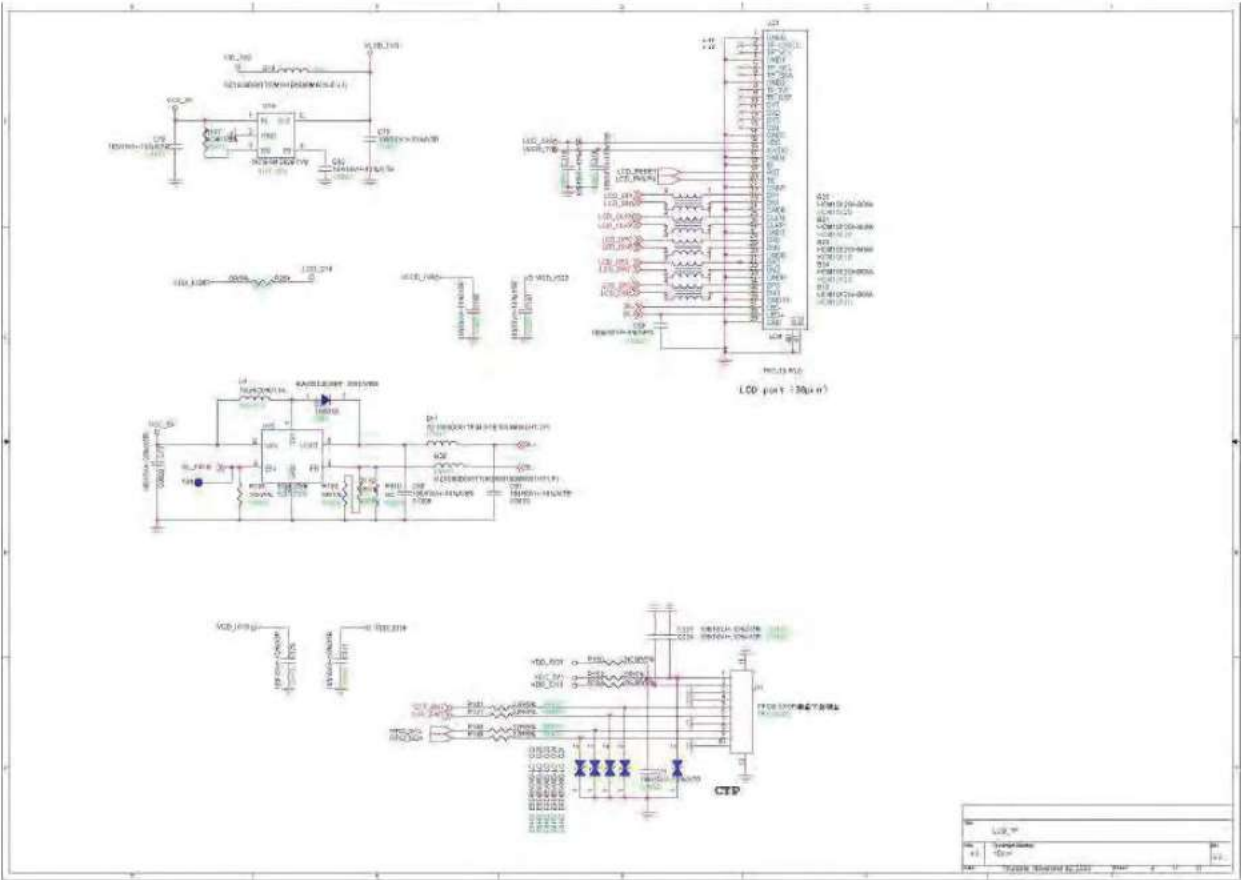
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Annex D

Circuit Diagram

Type: T10

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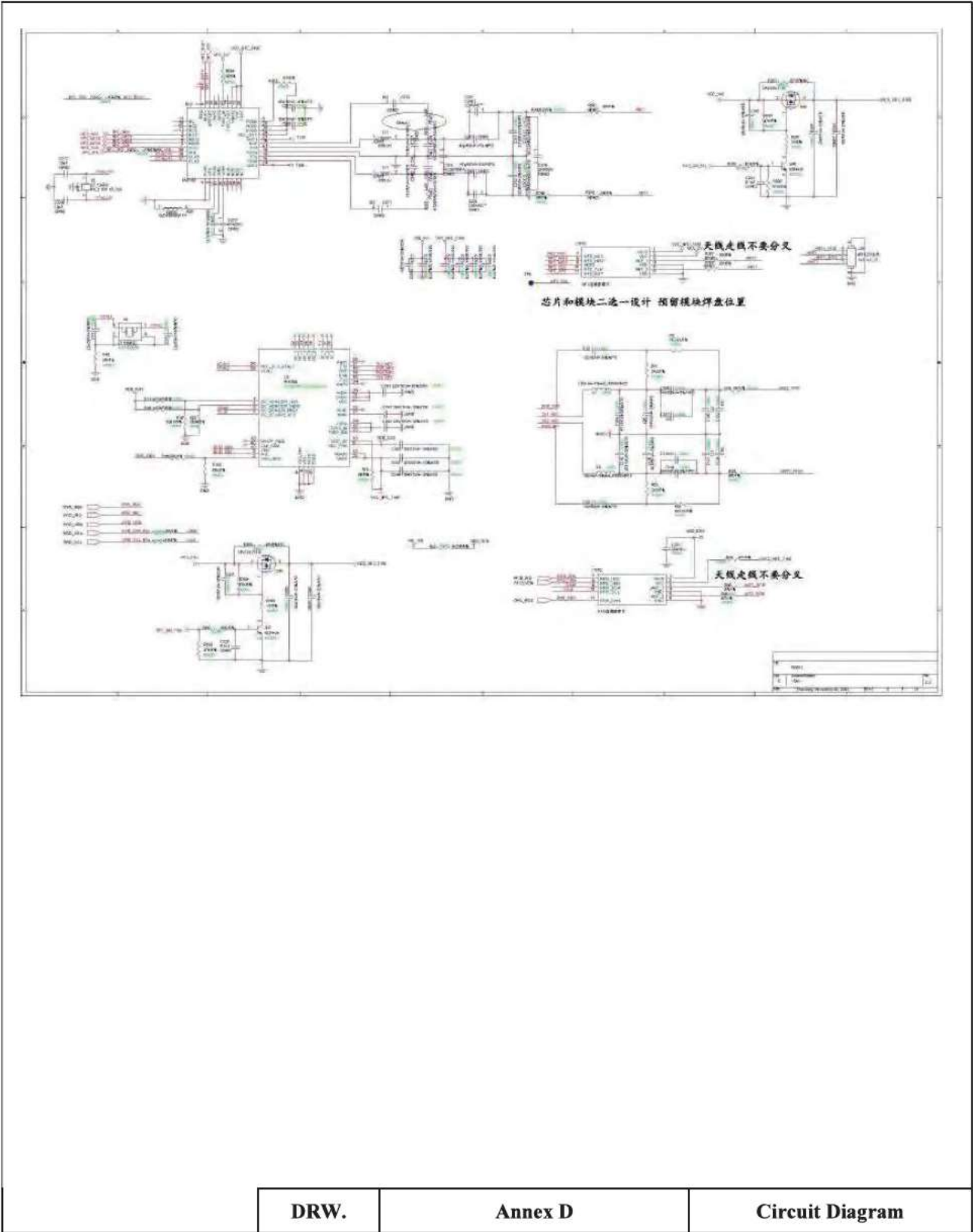
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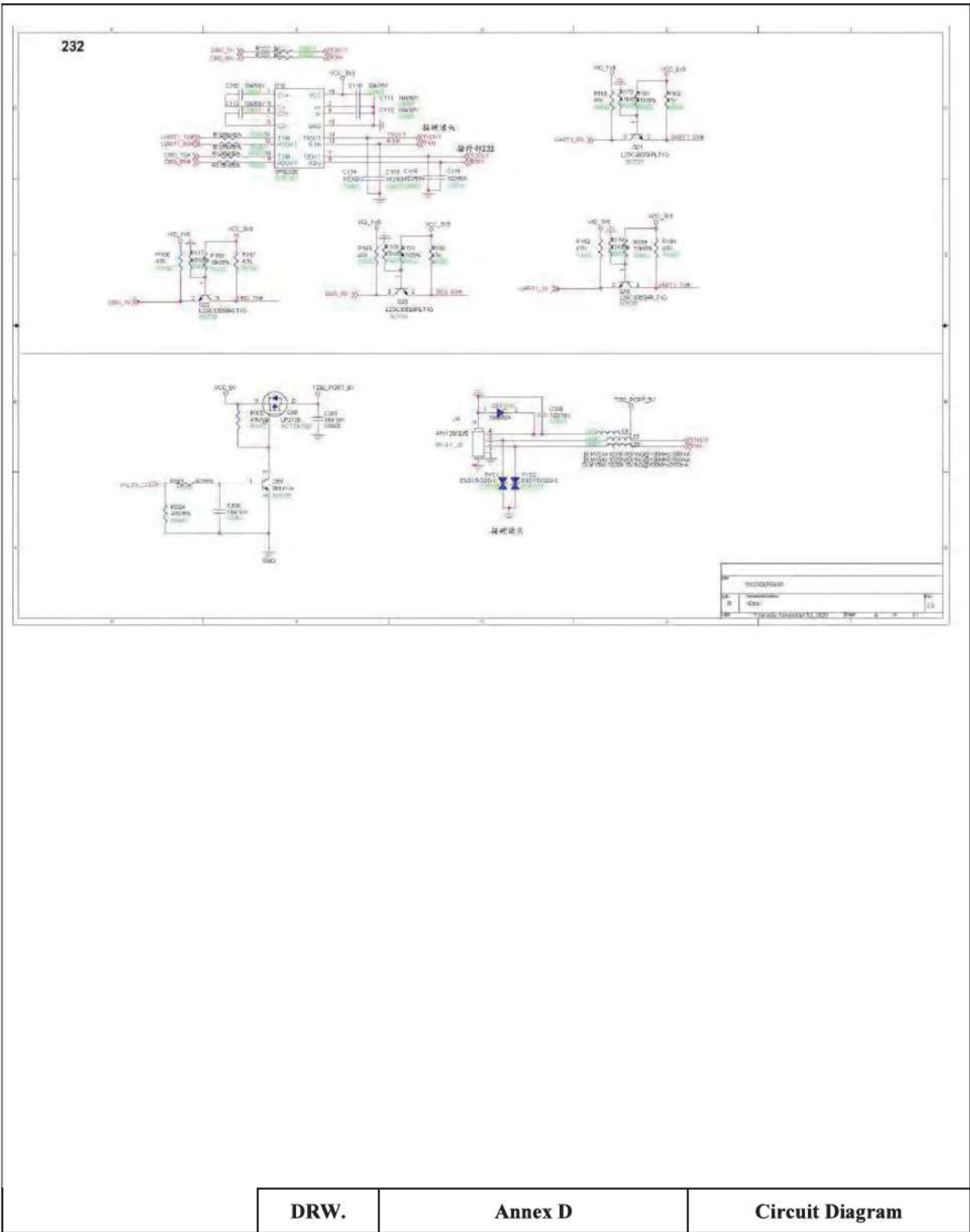
Annex D

Circuit Diagram

Type: T10

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DRW.

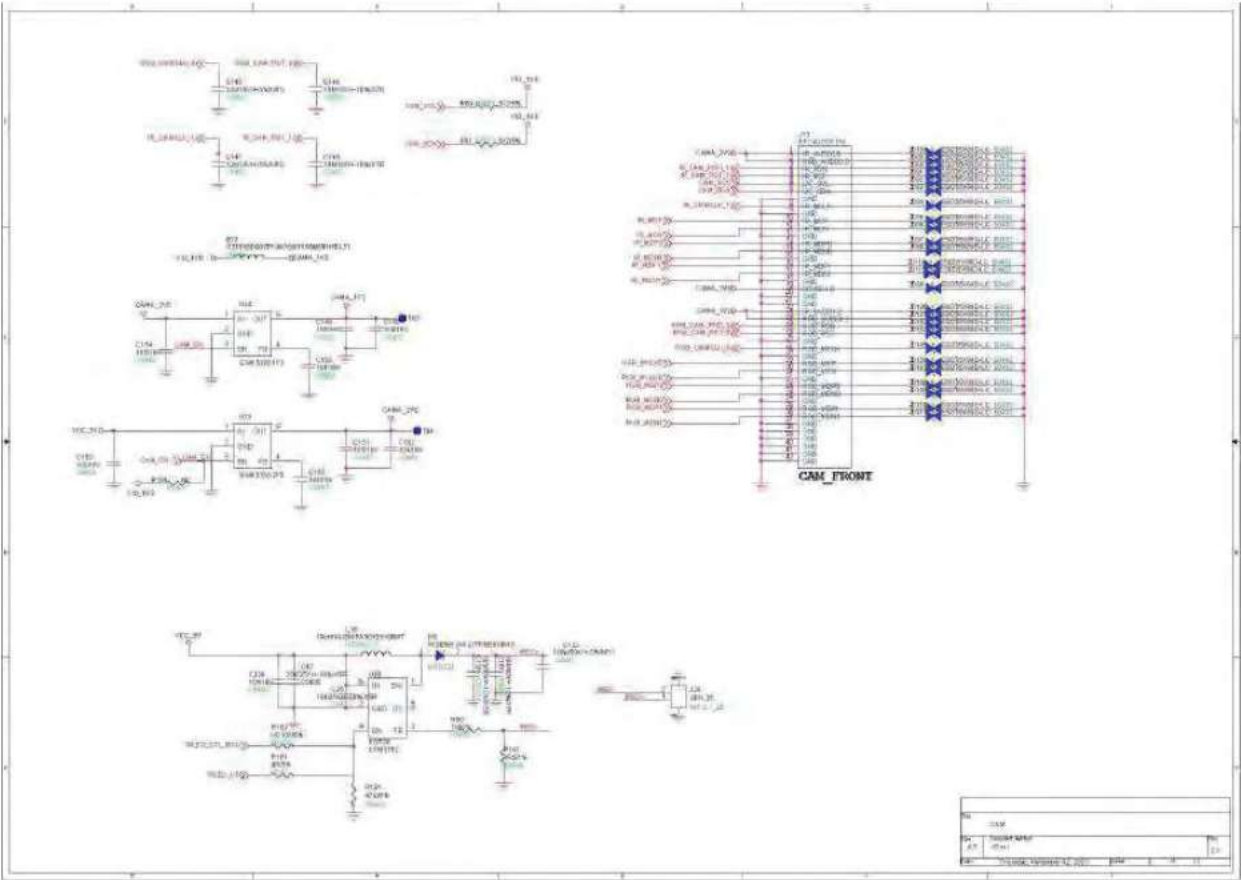
Annex D

Circuit Diagram

Type: T10

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DRW.

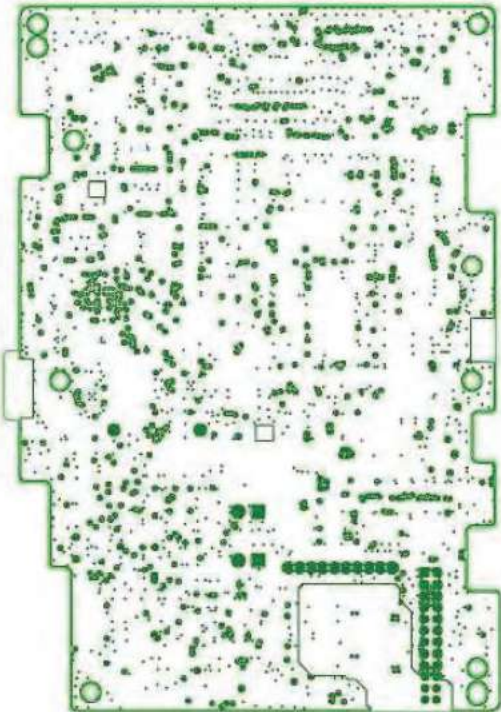
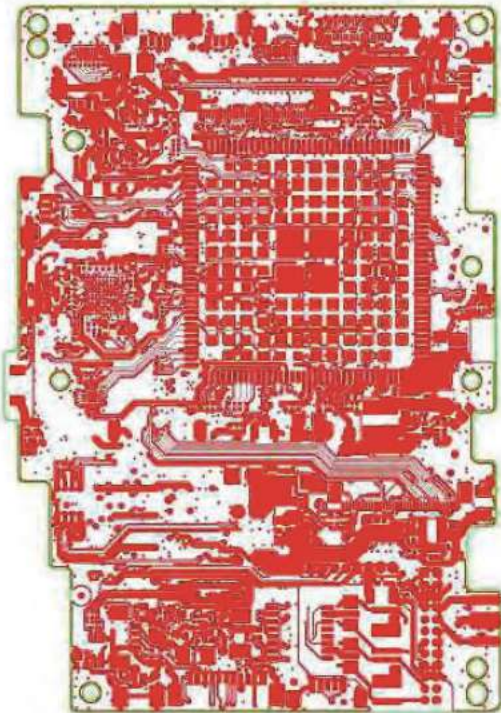
Annex D

Circuit Diagram

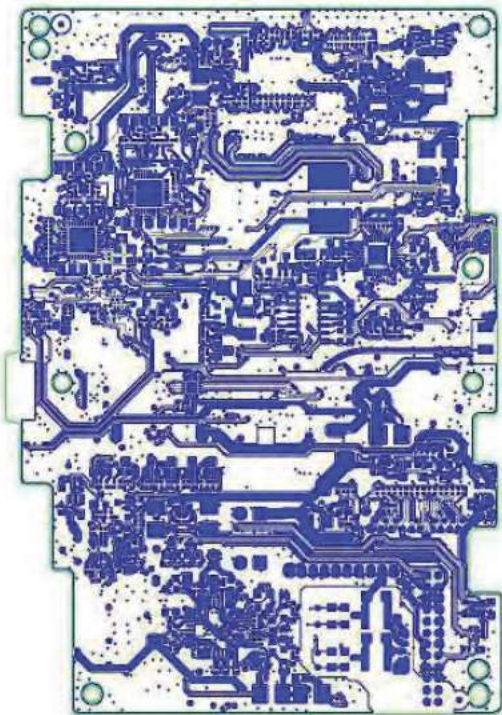
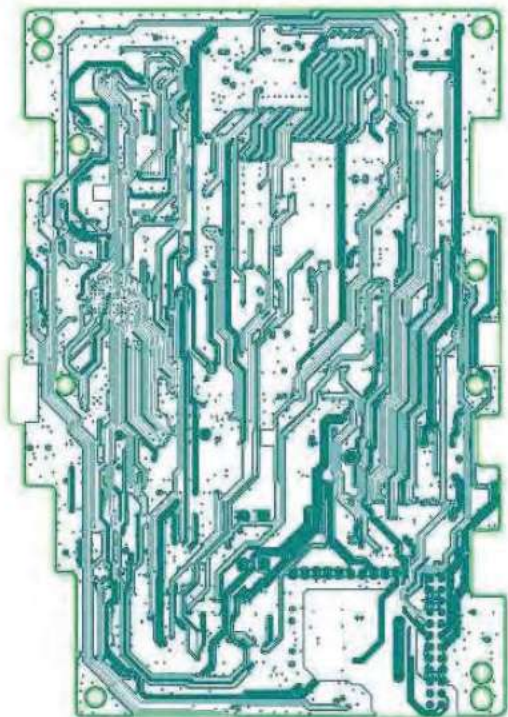
Type: T10

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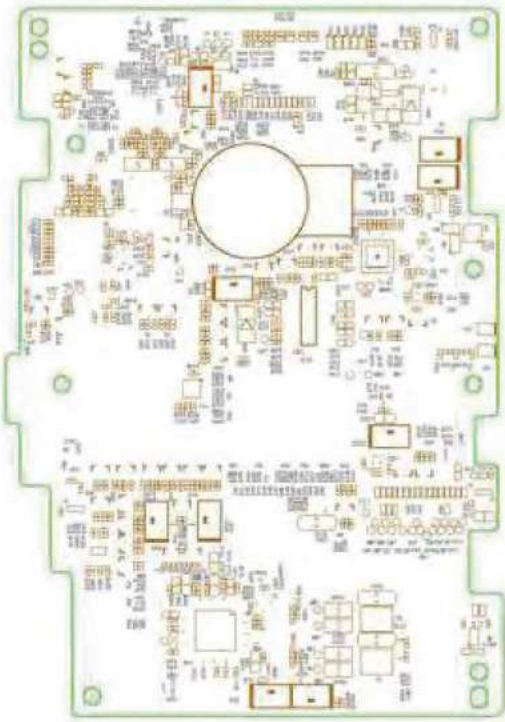
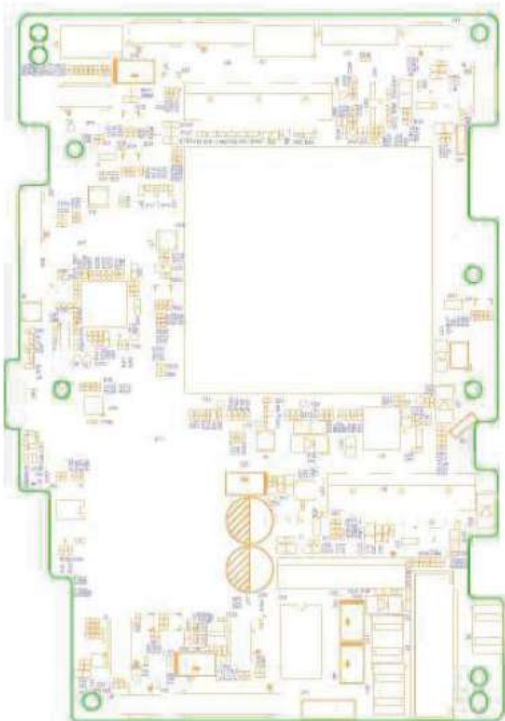




DRW.	Annex E	PCB Layout
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DRW.	Annex E	PCB Layout
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DRW.	Annex E	PCB Layout
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Bill of Material							
Sequence	Code	Name	Spec	Package	NO.	Tag	Unit
1	3050700003	BAT	3.3V/BAT-CE2032	BAT-CE2032	1	B74	[PCS]
2	3020200060	Capacitance	5.0F/5.5V	CAP-TH-22X11.5X28.5MM	1	B71	[PCS]
3	3070300002	Inductance	MCW2012B900GDE	L2012	1	B1	[PCS]
4	3070300005	Inductance	ACM2012D	ACM2012D	4	B2, B3, B4, B23	[PCS]
5	3070300006	Inductance	HCM1012GB900A05P	HCM1012G	5	B10, B21, B22, B24, B25	[PCS]
6	3040200005	Inductance	GZ1608D601TF/MGGB1608M601HT-LF	LO603	5	B11, B12, B19, B20, B26	[PCS]
7	3020100076	Capacitance	104/16V/+/-10%/X7R	C0402	97	C1, C2, C4, C8, C9, C11, C41, C42, C71, C82, C88, C91, C94, C100, C122, C146, C148, C159, C167, C248, C249, C276, C277, C278, C279, C280, C295, C300, C301, C304, C305, C308, C347, C348, C349, C350, C702, C16, C18, C20, C26, C27, C37, C83, C85, C88, C83, C84, C101, C108, C110, C117, C127, C128, C130, C150, C152, C155, C156, C191, C192, C204, C205, C206, C207, C214, C217, C226, C238, C25, C186, C168, C170, C172, C173, C175, C176, C177, C178, C180, C181, C183, C184, C225, C187, C188, C194, C195, C203, C208, C220, C221, C265, C288, C287, C289, C46	[PCS]
8	3020100079	Capacitance	12P/50V/+/-5%/NPO	C0402	7	C3, C6, C7, C12, C145, C147, C212	[PCS]
9	3020100051	Capacitance	105/16V/+/-10%/X5R	C0402	39	C15, C17, C19, C49, C61, C149, C151, C153, C154, C190, C227, C237, C241, C262, C263, C266, C24, C44, C85, C86, C87, C129, C131, C189, C196, C197, C202, C218, C219, C223, C224, C296, C307, C50, C78, C79, C239, C240, C303	[PCS]
10	3020200004	Capacitance	100U/50V/+/-20%/105°C/8*12	8*12	2	C28, C30	[PCS]
11	3020100109	Capacitance	106/16V/+/-20%/X5R	C0603	18	C36, C67, C199, C200, C201, C77, C89, C90, C92, C275, C294, C298, C302, C699, C700, C703, C162, C45	[PCS]
12	3020100054	Capacitance	226/25V/+/-20%/X5R	C0805	9	C38, C40, C43, C234, C235, C47, C97, C132, C213	[PCS]
13	3020100060	Capacitance	33P/50V/+/-5%/NPO	C0402	10	C5, C10, C60, C66, C98, C99, C211, C185, C186, C319	[PCS]
14	3020500006	Capacitance	100U/6V/6.3V/+/-10%	RB-3528	1	C216	[PCS]
15	3020100044	Capacitance	10P/50V/+/-5%/NPO	C0402	6	C34, C35, C39, C215, C273, C274	[PCS]
16	3020100037	Capacitance	106/50V/+/-10%/X5R	C1206	2	C80, C257	[PCS]
17	3020100033	Capacitance	104/50V/+/-10%/X7R	C0603	11	C29, C31, C33, C70, C72, C109, C111, C112, C113, C81, C161	[PCS]
18	3020100046	Capacitance	22P/50V/+/-5%/NPO	C0402	10	C73, C74, C93, C297, C298, C306, C311, C312, C313, C314	[PCS]
19	3020100047	Capacitance	101/50V/+/-5%/NPO	C0402	3	C64, C96, C133	[PCS]
20	3020100290	Capacitance	121/50V/+/-5%/NPO	C0402	2	C315, C310	[PCS]
21	3020100061	Capacitance	151/50V/+/-5%/NPO	C0402	2	C267, C134	[PCS]
22	3020100078	Capacitance	15P/50V/+/-5%/NPO	C0402	2	C163, C165	[PCS]

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23	3020100045	Capacitance	102/50V/±10%/X7R	C0402	8	C23, C75, C76, C102, C32, C209, C271, C272	[PCS]
24	3020100148	Capacitance	221/50V/±5%/NPO	C0402	2	C107, C116	[PCS]
25	3020100082	Capacitance	102/50V/±5%/NPO	C0603	4	C114, C115, C118, C119	[PCS]
26	3020100035	Capacitance	105/50V/±10%/X5R	C0603	2	C158, C164	[PCS]
27	3020100096	Capacitance	681/50V/±5%/NPO	C0402	2	C104, C143	[PCS]
28	3020100107	Capacitance	474/25V/±10%/X5R	C0402	2	C48, C270	[PCS]
29	3020100115	Capacitance	225/25V/±10%/X5R	C0402	2	C193, C198	[PCS]
30	3020100040	Capacitance	475/25V/±10%/X5R	C0805	4	C160, C171, C182, C174	[PCS]
31	3020100086	Capacitance	102/2KV/±10%/X7R	C1206	2	C179, C222	[PCS]
32	3190200009	Diode	ESD05V88D-LC	SOD-882	58	D2, D3, D7, D8, D13, D14, D20, D21, D22, D23, D24, D31, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D53, D54, D55, D56, D70, D71, D89, D90, D91, D92, D93, D94, D95, D96, D97, D98, D99, D100, D101, D102, D103, D104, D105, D106, D107, D108, D109, D110, D111, D115, D116	[PCS]
33	3060300021	Diode	BAT54A-30V/200mA	SOT23	1	D112	[PCS]
34	3060300017	Diode	BAT54C	SOT23	2	D9, D10	[PCS]
35	3060300060	Diode	1N4148SN	SOD323	1	D5	[PCS]
36	3060300016	Diode	SE34	DO-214AA	5	D1, D16, D17, D18, D28	[PCS]
37	3060300057	Diode	Vrrm=40V/Ifav=1A/SS14	SMAJ	1	D25	[PCS]
38	3190100015	Diode	SMBJ15CA	DO-214AA	2	D113, D114	[PCS]
39	3190100020	Diode	PTVSHC3D7V0H/Prisemi	SOD-323	2	D26, D27	[PCS]
40	3190200010	Diode	ESD3.3V88D-C	SOD-882	1	D19	[PCS]
41	3190200017	Diode	ESD03V52D-LCF	DFN1610TN	6	ESD1, ESD2, ESD3, ESD4, ESD5, ESD6	[PCS]
42	3030100110	Resistance	0R/5%	R0402	79	R81, R31, R36, R39, R42, R56, R61, R62, R66, R68, R70, R71, R72, R73, R74, R77, R78, R79, R95, R103, R106, R112, R116, R119, R124, R129, R152, R156, R163, R164, R181, R183, R193, R195, R200, R202, R218, R219, R222, R223, R226, R227, R228, R229, R253, R254, R255, R257, R263, R266, R267, R269, R270, R271, R301, R274, R275, R278, R280, R285, R314, R338, R340, R341, R342, R345, R346, R355, R356, R19, R20, R321, R323, R348, R349, R283, R286, R292, R302	[PCS]
43	3040200029	Inductance	120R/2A/MGLB1608M121T2R0-1F	L0603	2	FB2, FB3	[PCS]
44	3190400028	Inductance	SMD0603-075/I-hold=750mA/VDC=6V		2	F3, F4	[PCS]
45	3190300005	Diode	UN1812-90CSMD	UN1812	2	G1, G2	[PCS]
46	3300800060	Connector	5P/1.25	WF-5-1.25	1	JP1	[PCS]
47	3300800057	Connector	4P/1.25	WF-4-1.25	6	JP2, J4, J8, J16, J20, J10	[PCS]
48	3300800081	Connector	U-FL-R-SMT(10)-3P	20279-001E-01	4	J5, J6, J7, J12	[PCS]
49	3300800050	Connector	2P/1.25	LED-1.25	3	J9, J17, J28	[PCS]
50	3300800026	Connector	2*12P/PH/2.0	3-1.2	1	J3	[PCS]
51	3300100067	Connector	FPC/0.5/40P	3-1.2	1	J13	[PCS]
52	3300100082	Connector	FPC/0.5/10P	FPC10-0.5	1	J11	[PCS]
53	3300100030	Connector	FPC/0.5/40P	FPC40-P05-DN	1	J18	[PCS]

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54	3300800092	Connector	11P/1.25		1	J24	[PCS]
55	3300800036	Connector	10P/PH/2.0	CON10-2.0MM	1	J25	[PCS]
56	3300100005	Connector	PPC/0.3/39P	FPC-39-P0.6	1	J23	[PCS]
57	3301200022	Connector	RJTX131213016/3.5*1.5*3.5mm	2.5X1.5-T	2	J29, J34	[PCS]
58	3300100056	Connector	PPC/0.5/12P	TF_TA0907110190-17	1	J19	[PCS]
59	3060400008	Diode	RFD	LED0603	1	LED1	[PCS]
60	3040200038	Inductance	BLM15AX102SN1D/1kΩ ±100MHz/350mA	L0402	3	L4, L22, L23	[PCS]
61	3040200018	Inductance	120R/1.2A/MGLB1608M121T1R2	L0603	1	L15	[PCS]
62	3040100065	Inductance	10uH/Isat=2A Trms=1.6A/MPSA0402S-100MT	IND-4X4	4	L1, L2, L9, L16	[PCS]
63	3040400072	Inductance	6.8nH/± 5%/300mA/MGCI1005T6N8JT-LF	L0402	1	L20	[PCS]
64	3040400038	Inductance	5.6nH/± 0.3nH/300mA/LQG15HN5NGS02D	L0402	1	L19	[PCS]
65	3040400016	Inductance	22nH/300mA/± 5%/SDCL1005C22NJTDF	L0402	1	L13	[PCS]
66	3040400042	Inductance	160nH/TDK/ML1608R16JT000/±5%	L0603	2	L3, L5	[PCS]
67	3060100005	Triode	9014-J6	SOT23	21	Q1, Q2, Q4, Q5, Q6, Q7, Q9, Q11, Q13, Q17, Q32, Q37, Q43, Q44, Q46, Q47, Q12, Q53, Q55, Q57, Q59	[PCS]
68	3060100007	Triode	9015	SOT23	2	Q10, Q25	[PCS]
69	3060100020	Triode	L2SC3356LT1G	SOT23	13	Q14, Q15, Q16, Q18, Q21, Q22, Q23, Q28, Q29, Q30, Q39, Q51, Q54	[PCS]
70	3060200020	MOS	WPM2026/TH	SOT-23	1	Q20	[PCS]
71	3060200031	MOS	LP2128LT1G	SOT23	10	Q3, Q8, Q19, Q36, Q58, Q60, Q33, Q34, Q48, Q49	[PCS]
72	3030100115	Resistance	100K/5%	R0402	6	R10, R22, R158, R186, R518, R28	[PCS]
73	3030100162	Resistance	1W/1%	R0402	5	R18, R210, R276, R295, R83	[PCS]
74	3030100248	Resistance	12K/1%	R0402	4	R21, R199, R203, R208	[PCS]
75	3030100124	Resistance	4K7/5%	R0402	17	R93, R232, R234, R303, R343, R344, R520, R125, R131, R132, R134, R135, R137, R138, R140, R188, R260	[PCS]
76	3030100131	Resistance	47K/5%	R0402	53	R25, R30, R37, R45, R51, R67, R111, R117, R144, R161, R172, R174, R177, R178, R179, R187, R190, R191, R196, R198, R231, R233, R242, R244, R247, R248, R249, R250, R251, R252, R258, R261, R262, R264, R265, R277, R289, R290, R298, R299, R304, R305, R360, R363, R364, R142, R154, R160, R162, R166, R167, R169, R180	[PCS]
77	3030100339	Resistance	10K7/1%	R0402	4	R24, R43, R120, R47	[PCS]
78	3030100182	Resistance	15K/1%	R0402	1	R33	[PCS]
79	3030100029	Resistance	1R/5%	R0603	1	R118	[PCS]
80	3030100175	Resistance	2K7/1%	R0402	1	R225	[PCS]
81	3030100144	Resistance	12K7/1%	R0402	1	R312	[PCS]
82	3030100151	Resistance	75K/5%	R0402	1	R313	[PCS]

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83	3030100191	Resistance	668/1%	R0402	2	R34, R29	[PCS]
84	3030100400	Resistance	0R/1%	R0603	6	R114, R316, R192, R217, R245, R284	[PCS]
85	3030100114	Resistance	10K/5%	R0402	38	R88, R96, R108, R133, R136, R139, R159, R168, R194, R224, R240, R241, R288, R297, R319, R322, R325, R326, R327, R328, R329, R330, R331, R333, R353, R361, R52, R434, R515, R516, R519, R26, R27, R437, R268, R294, R306, R49	[PCS]
86	3030100135	Resistance	10K/1%	R0402	1	R35	[PCS]
87	3030100158	Resistance	47K/1%	R0402	2	R64, R435	[PCS]
88	3030100136	Resistance	100K/1%	R0402	12	R1, R3, R6, R7, R8, R11, R13, R14, R17, R157, R85, R48	[PCS]
89	3030100174	Resistance	2K4/5%	R0402	2	R273, R281	[PCS]
90	3030100186	Resistance	2K2/5%	R0402	13	R4, R63, R80, R81, R94, R170, R201, R220, R221, R239, R332, R352, R86	[PCS]
91	3030100149	Resistance	30K/1%	R0402	1	R91	[PCS]
92	3030100217	Resistance	62K/5%	R0402	2	R92, R151	[PCS]
93	3030100039	Resistance	33R/5%	R0603	2	R339, R347	[PCS]
94	3030100122	Resistance	33R/5%	R0402	2	R97, R98	[PCS]
95	3030100403	Resistance	10R/1%	R1206	1	R38	[PCS]
96	3030100120	Resistance	22R/5%	R0402	6	R121, R141, R148, R149, R10059, R10061	[PCS]
97	3030100016	Resistance	1R5/1%	R0805	1	R147	[PCS]
98	3030100582	Resistance	13K3/1%/	R0402	1	R155	[PCS]
99	3030100392	Resistance	82K/1%	R0402	1	R184	[PCS]
100	3030100529	Resistance	5K6/1%/	R0402	1	R165	[PCS]
101	3030100137	Resistance	200R/5%	R0402	1	R436	[PCS]
102	3030100121	Resistance	22K/5%	R0402	2	R173, R32	[PCS]
103	3030100041	Resistance	75R/5%	R0603	2	R171, R243	[PCS]
104	3030100022	Resistance	5R1/5%	R0805	1	R109	[PCS]
105	3030100113	Resistance	1K/5%	R0402	12	R50, R90, R115, R126, R128, R175, R176, R216, R291, R300, R359, R365	[PCS]
106	3030100031	Resistance	1K/1%	R0603	1	R279	[PCS]
107	3030100001	Resistance	0R/5%	R0805	4	R204, R205, R206, R207	[PCS]
108	3030100033	Resistance	1M/5%	R0603	2	R209, R238	[PCS]
109	3030100163	Resistance	49R9/1%	R0402	4	R211, R212, R213, R214	[PCS]
110	3030100134	Resistance	5K1/1%	R0402	1	R99	[PCS]
111	3301200018	Connector	1.50*#1, 40*#11, 40		2	SH1, SH2	[PCS]
112	3301200015	Connector	SUS301/3P/0.8*6.5mm	SHIELD-3P	3	SH6, SH7, SH8	[PCS]
113	3301200042	Connector	POGO/D-0.75mm	PGC20302	1	TP14	[PCS]
114	3190200015	Diode	ESD15V32D-1C	SOT-323	2	TVS1, TVS2	[PCS]
115	3060500005	Diode	5V1/1/2W	LL-34	1	T23	[PCS]
116	3100600009	IC	USX2064T/M2	QFN36	1	U1	[PCS]
117	3090400051	LDO	SGM2028-3.3	SOT23-5	3	U3, U4, U31	[PCS]
118	3110500022	IC	BCT4227EMB-TR	MSOP-10	1	U5	[PCS]
119	3090700007	IC	DI070002A	BGA420	1	U7	[PCS]

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120	3100700004	IC	PN5180/PN5180A0HN/C2Y	HVQFN40	1	U10	[PCS]
121	3090200054	DCDC	SGM61230/4.5V-28V/3A/0.603V	SOT23-6	3	U11, U14, U35	[PCS]
122	3090600010	IC	SGM802-2.93YC4G-TR/1.0-5.5V/SGM802-2.93YC4G-TR	SC70-4 (R)	2	U13, U40	[PCS]
123	3130100223	4G	SC200E-FU	SC200E	1	U49	[PCS]
124	3110400012	IC	ANT8110	MSOP8	1	U12	[PCS]
125	3090500011	IC	SGM3766	SOT-23-5	1	U15	[PCS]
126	3100700019	IC	PNT160/TIC/SPI/HVQFN40	HVQFN40	1	U2	[PCS]
127	3101100023	IC	ME2101/384KB SRAM/16MB Flash/3.3V/BGA121	BGA121 0.35 0.65	1	U17	[PCS]
128	3110500005	IC	SP3232EEN	S016	1	U18	[PCS]
129	3110500007	IC	TP8485E	S08	1	U19	[PCS]
130	3110500072	IC	HCT0104EFE-TR	TQFN3X3-16L	2	U47, U48	[PCS]
131	3090400057	LDO	SGM2019-2.8VNSG/TR	SOT23-5	1	U23	[PCS]
132	3090400053	LDO	SGM2019-1.2VNSG/TR	SOT23-5	1	U24	[PCS]
133	3100500003	IC	AX88772CLF	QFP64	1	U26	[PCS]
134	3190300012	Diode	P3100SC/275V/100A@10/1000/30pF@1MHz	SMB	2	G8, G9	[PCS]
135	3190300006	Diode	UN3E5-90LSMD	GDT-5X7.6	3	G4, U27, U28	[PCS]
136	3120100019	IC	LP9016NL/100Mbps/SOP16	SOP16	1	U29	[PCS]
137	3190200008	Diode	TPD4E05U06/U3C0514P10	US0N10	1	U30	[PCS]
138	3110100017	IC	SGM7S214	SOT23-5	1	U32	[PCS]
139	3110500038	IC	SGM4553YN8G/TR	SOT-23-8	1	U50	[PCS]
140	3090500004	IC	SGM3752	SOT26	1	U39	[PCS]
141	3060200041	MOS	BSP2060B/-20V/-60A	PDFN3X3-8L	1	U45	[PCS]
142	3070100004	Oscillator	25MHz/10PPM/20pF	CRY-D3225	1	X1	[PCS]
143	3070100001	Oscillator	24MHz/20PPM/12pF	CRY-D3225	1	Y1	[PCS]
144	3070100005	Oscillator	27.12MHz/20PPM	SMD3225	2	Y2, Y4	[PCS]
145	3070100003	Oscillator	12MHz/20PPM/20pF	CRY-D3225	1	Y3	[PCS]
146	3070100008	Oscillator	32.768kHz/20PPM/12P	CRY-MC146	1	Y9	[PCS]
147	3190100006	Diode	SMBJ6.0A	SMB	9	ZD2, ZD11, ZD12, ZD6, ZD7, ZD8, ZD14, ZD19, ZD20	[PCS]
148	3060300051	Diode	Vrrm: 40V/Ifav: 1A/B5819WS	SOD323	1	D6	[PCS]
149	3040400005	Inductance	500nH/MGTC0805CW561JST	L0805	2	L11, L17	[PCS]
150	3040100053	Inductance	10uH/Isat=3.2A/SRPA6045S100MT	L 6X6	1	L14	[PCS]
151	36000472-102	PCB	T10 MAIN V1.0.2 20231103		1		[PCS]
152	3020100124	Capacitance	47p/50V/+/-5%/COG	C0402	2	C290, C293	[PCS]
153	3010400081	Inductance	10nH/300mA/5%/SACL1005C10N(TDF)	L0402	1	L21	[PCS]

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ATTESTATION OF CONFORMITY

Attestation Number: SZ1240307-11326E-EM

Date of Issue: 2024-07-17

Manufacturer:

Company name: Telepower Communication Co., Ltd.

Address: UNITS 502 & 504 5/F, UNITS 201 & 203 2/F, BUILDING 5 ZONE A, HANTIAN
SCIENCE & TECHNOLOGY PARK, NO.17 SHENHAI RD., GUICHENG
STREET, NANHAI DISTRICT, FOSHAN, GUANGDONG, CHINA

Product:

Name: Ticket Validator

Model(s): T10

Trade Mark:

Telpo

Bay Area Compliance Laboratories Corp. (Shenzhen) hereby declares that the submitted sample(s) of the above equipment has been tested for CE regulations and in accordance with the European Directives and Standards:

EMC Directive 2014/30/EU

Essential Requirements		Harmonized Standards	Test Report Number
EMCD Clause 1(a)	Emission	EN 55032:2015/A11:2020; EN IEC 61000-3-2:2019+A1:2021; EN 61000-3-3:2013/A2:2021/AC:2022-01	SZ1240307-11326E-EM-01
EMCD Clause 1(b)	Immunity	EN 55035:2017/A11:2020	SZ1240307-11326E-EM-01



Mark is permitted only after all applicable requirements are met in accordance with the CE regulation requirements, including the manufacturer's issuance of a "Declaration of Conformity. The Declaration of Conformity is issued under the sole responsibility of the manufacturer. This attestation is specific to the standard(s) stated above and compliance with additional standards and/or CE regulations are applicable.

Attestation by:

Lab Manager: Alvin Huang

Signature:



USA: TCB, ISED: FCB
Japan: RCB, OFCA: FCB, IMDA: CAB
Notify Body RED Directive 2014/53/EU
Notify Body EMC Directive 2014/30/EU

DIRECTIVE 2014/53/EU
EU TYPE EXAMINATION CERTIFICATE
NOTIFIED BODY: 1313

Certificate No.: B2407051
Date of Issue: 2024-07-17
Manufacturer: Telepower Communication Co., Ltd.
UNITS 502 & 504 5/F, UNITS 201 & 203 2/F, BUILDING 5 ZONE A,
HANTIAN SCIENCE & TECHNOLOGY PARK, NO.17 SHENHAI RD.,
GUICHENG STREET, NANHAI DISTRICT, FOSHAN, GUANGDONG, CHINA
Trade Name: Telpo
Product Designation: T10
Product Description: Ticket Validator

Essential Requirements		Examined Documentation	Results
RED Article 3.1(a)	Safety	Technical documentation & Test report	Conform
RED Article 3.1(a)	Health	Technical documentation & Test report	Conform
RED Article 3.1(b)	EMC	Technical documentation & Test report	Conform
RED Article 3.2	Radio	Technical documentation & Test report	Conform
RED Article 3.3	Delegated Acts	Technical documentation & Test report	No Assessment

This EU-Type Examination Certificate is issued in accordance with Annex III, Module B of Council Directive 2014/53/EU of 16 April, 2014 and is only valid in conjunction with the attached Appendixes.

The scope of EU Type Examination only relates to the submitted documentation.

Marking: The product shall be marked with the CE marking as required in the Council Directive 2014/53/EU

Number of Appendixes to this certificate: 1



Authorized by:

Ivan Cao
Certifier



CI021-D

APPENDIX A OF TYPE EXAMINATION CERTIFICATE

Product Characteristics

TX Frequency:	EGSM900: 880-915 MHz, DCS1800: 1710-1785 MHz WCDMA: 1920-1980 MHz (B1), 880-915 MHz (B8) LTE: 1920-1980 MHz (B1), 1710-1785 MHz (B3), 824-849 MHz (B5), 880-915 MHz (B8), 832-862 MHz (B20), 703-748 MHz (B28), 2570-2620 MHz (B38), 2300-2400 MHz (B40), 2496-2690 MHz (B41) Bluetooth/BLE: 2402-2480 MHz 2.4 GHz Wi-Fi: 2412-2472 MHz/2422-2462 MHz 5 GHz Wi-Fi: 5150-5250 MHz NFC: 13.56 MHz
RX Frequency:	EGSM900: 925-960 MHz, DCS1800: 1805-1880 MHz WCDMA: 2110-2170 MHz (B1), 925-960 MHz (B8) LTE: 2110-2170 MHz (B1), 1805-1880 MHz (B3), 869-894 MHz (B5), 925-960 MHz (B8), 791-821 MHz (B20), 758-803 MHz (B28), 2570-2620 MHz (B38), 2300-2400 MHz (B40), 2496-2690 MHz (B41) Bluetooth/BLE: 2402-2480 MHz 2.4 GHz Wi-Fi: 2412-2472 MHz/2422-2462 MHz 5 GHz Wi-Fi: 5150-5250 MHz NFC: 13.56 MHz GPS L1 C/A, BDS B1I: 1559-1610 MHz
ITU Designation:	GXW, G7W, F9W, G7D, D7W, G1D, D1D, F1D, A1D
Output Power:	EGSM900: 32.83 dBm (GMSK), 26.92 dBm (8PSK) DCS1800: 27.67 dBm (GMSK), 26.12 dBm (8PSK) WCDMA: 21.99 dBm(B1), 21.97 dBm(B8) LTE: 21.8 dBm (B1), 21.9 dBm (B3), 23.6 dBm (B5), 23.9 dBm (B8), 23.2 dBm(B20), 23.0 dBm (B28), 20.9 dBm (B38), 22.7 dBm (B40), 21.8 dBm (B41) Bluetooth: 9.49 dBm, BLE: -1.04 dBm 2.4 GHz Wi-Fi: 17.35 dBm 5.2 GHz Wi-Fi: 10.19 dBm NFC: 23.26 dBuA/m @ 3m
Modulation:	EGSM & DCS: GMSK, 8PSK WCDMA: BPSK, QPSK, 16QAM, 64QAM LTE: QPSK, 16QAM, 64QAM Bluetooth: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 2.4 GHz Wi-Fi: DSSS, OFDM 5 GHz Wi-Fi: OFDM GPS L1 C/A, BDS B1I: BPSK NFC: ASK
Antenna:	2G/3G/4G: FPC Antenna, 3.98 dBi (Max.) Wi-Fi/Bluetooth: FPC Antenna, 2.48 dBi @ 2.4 GHz, 2.49 dBi @ 5 GHz GNSS: Ceramic Antenna, 3 dBi NFC: Loop Antenna

Conformity Details

Requirement	Standard, Test Report Number, Date & Laboratory
Radio Spectrum	<p>ETSI EN 300 328 V2.2.2 (2019-07) Test Report SZ1240307-11326E-RF-22A/-22B/-22C issued on 2024-07-03 by BACL, Shenzhen</p> <p>ETSI EN 300 330 V2.1.1 (2017-02) Test Report SZ1240307-11326E-RF-22D issued on 2024-07-03 by BACL, Shenzhen</p> <p>ETSI EN 303 413 V1.2.1 (2021-04) Test Report SZ1240307-11326E-RF-22E issued on 2024-07-03 by BACL, Shenzhen</p> <p>ETSI EN 301 893 V2.1.1 (2017-05) Test Report SZ1240307-11326E-RF-22F issued on 2024-07-03 by BACL, Shenzhen</p> <p>ETSI EN 301 511 V12.5.1 (2017-03) Test Report SZ1240307-11326E-RF-11 issued on 2024-07-11 by BACL, Shenzhen</p> <p>ETSI EN 301 908-1 V15.2.1 (2023-01), ETSI EN 301 908-2 V13.1.1 (2020-06) Test Report SZ1240307-11326E-RF-22G issued on 2024-07-03 by BACL, Shenzhen</p> <p>ETSI EN 301 908-1 V15.2.1 (2023-01), ETSI EN 301 908-13 V13.2.1 (2022-02) ETSI TS 136 521-1 V17.5.0 (2023-01) Test Report SZ1240307-11326E-RF-22H issued on 2024-07-11 by BACL, Shenzhen</p>
EMC	<p>ETSI EN 301 489-1 V2.2.3 (2019-11), ETSI EN 301 489-3 V2.3.2 (2023-01) ETSI EN 301 489-17 V3.2.4 (2020-09), ETSI EN 301 489-19 V2.2.1 (2022-09) ETSI EN 301 489-52 V1.2.1 (2021-11) Test Report SZ1240307-11326E-EM-02 issued on 2024-07-03 by BACL, Shenzhen</p>
Safety	<p>EN IEC 62368-1:2020+A11:2020 Test Report SZ1240307-11326E-SF issued on 2024-03-29 by BACL, Shenzhen</p>
Health	<p>EN IEC 62311:2020, EN 50665:2017 Test Report SZ1240307-11326E-RF issued on 2024-07-03 by BACL, Shenzhen</p>

***** End of Appendix *****



Bay Area Compliance Laboratories Corp. (BACL)
1274 Anvilwood Avenue, Sunnyvale, CA 94089, USA
Tel: 1 (408) 732-9162 Fax: 1 (408) 732-9164 Web: www.baclcorp.com

Mastercard
2000 Purchase Street
Purchase, NY 10577
USA



ID TECH
10721 Walker street Cypress California 90630 USA

June 16, 2023

Mastercard Contactless Reader Vendor Product – Letter of Approval

LoA Identifier: TLOA-IDTE230502-230616(a)
Product Vendor: ID TECH
Product Type: Intelligent Card Reader
LoA Expiration Date: June 15, 2027

Product Identification	Card Reader
Product Commercial Name	Kiosk IV
Product Technical Name	80160100 Rev.A
Application Selection Module	N/A
Mastercard Contactless Application	MasterCard 3.1.4 v1.0
Operating System	uCOSII v2.81
Product Registration Number	ICR-IDTE-230502

EMVCo Contactless LoA Level 1:	16027 0218 260 26b 26b BCTC
Test Assessment Level 2:	TTAS-IDTE230502-BCT-2306-T059

Supported Options	
PIN Entry Device	No
Contactless Mag-stripe	Yes
Send POI information	Yes
C-2 Spec Bulletin 261	No
Data Exchange / Data Storage	Yes
Integrated Data Storage and Torn Transaction	Yes

Please contact the product vendor to obtain the full description of all the technical features supported by the product.

Under the terms of the Mastercard Contactless Specification License Agreement entered into between Mastercard Europe S.A. (formerly known as Mastercard Europe sprl) and Product Vendor on December 14, 2009 ("**Agreement**"), Product Vendor is required to submit its Implementation (as defined in the Agreement) to Mastercard or, to a third party designated by Mastercard ("**Testing Laboratory**"), for testing and certification prior to being permitted to sell, offer to sell, distribute, supply or otherwise provide ("**Commercialize**") any Implementation (as defined in the Agreement) in accordance with the Agreement.

This Letter of approval ("**LoA**") documents the fact that the Product Vendor has submitted the product (referenced above) ("**Product**") to Mastercard or, to a third party designated by Mastercard, for testing and certification in accordance with the Agreement but is not, and should not be interpreted as, an approval of the Product.

Subject to Product Vendor fully complying with the Conditions of Approval set out in Appendix 1 of this LoA, this LoA permits the Product Vendor to advise its customers that the Product has, in Mastercard's assessment opinion (and/or the Testing Laboratories

assessment opinion, if applicable), appeared to satisfy the requirements of the Specification set out in Appendix 1.

THIS LETTER DOES NOT CONSTITUTE AN ENDORSEMENT OR WARRANTY OF ANY KIND WITH RESPECT TO THE PRODUCT, ITS SECURITY OR FUNCTIONALITY.

MASTERCARD MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. WITHOUT LIMITATION OF THE FOREGOING, MASTERCARD SPECIFICALLY DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES: (I) REGARDING THE FUNCTIONALITY, SECURITY, QUALITY AND PERFORMANCE OF THE PRODUCT; (II) WITH RESPECT TO ANY THIRD PERSON INTELLECTUAL PROPERTY RIGHTS. PRODUCT VENDOR ASSUMES THE ENTIRE RISK ARISING OUT OF THE USE OF AND/OR RELIANCE ON THE PRODUCT.

The Product Type will be listed on the Mastercard customer portal until the LoA Expiration Date (referred to above). Any change to the Product Type must be promptly notified to Mastercard in writing.

Mastercard reserves the right to use a Product that has been granted a LoA as a reference for future testing, certification or approval of other Mastercard Contactless products.

Yours sincerely,

**Bruno
PARFUM**

Digitally signed by
Bruno PARFUM
Date: 2023.06.16
16:13:37 +02'00'

Bruno Parfum
Director, Product Approvals
Digital Devices & IoT | Cyber & Intelligence Solutions

Appendix 1

Specifications and References

For the purpose of this LoA, the following documents will be deemed to be the "Specifications":

EMV Contactless Interface Specification Version 3.0 - February 2018
Mastercard Contactless Reader Specification - Version 3.1.4 - November 2020
EMV Book C-2 - Kernel 2 Specification - Version 2.10 - March 2021
Mastercard Contactless Performance Requirement – Application Note #7 – March 2014

Conditions of Approval

The Product Vendor hereby agrees to comply with the following conditions in order for this LoA to be valid and before it is permitted to Commercialize the Product:

1. This LoA may be updated by Mastercard (in its sole discretion): (a) if Mastercard receives additional information from the Product Vendor about the Product; (b) in the event that Mastercard has a reasonable belief that the Product has a material defect (whether such defect is to hardware or software); (c) if Mastercard deems appropriate as a result of any activity that causes non-compliance with the Specification or any security issue arising with the Product; or (e) if otherwise reasonably required by Mastercard.
2. During the term of the LoA, the Product Vendor shall ensure that all versions of the Product produced must be materially identical with the samples of the Product that were submitted for testing to Mastercard and to which this LoA relates. Any change in any version of the Product that, in Mastercard's sole opinion, generates a different behavior of the Product that was submitted to Mastercard for testing and to which this LoA relates will be considered a material modification (whether such modification is to hardware or software) to the Product (for which this LoA does not apply to) and must be resubmitted to Mastercard for testing and approval. No PIN Entry Device security testing (PCI PED) has been performed on this Product. PIN Entry is not a supported option on this Product.

3. EMVCo Contactless Level 1 LoA comments and restrictions:

This PCD is not compliant with some analogue requirements introduced in the new EMV specification v3.0.

EMVCo has assessed these non-compliances as acceptable during the global transition to this new specification as per the EMVCo Restricted Renewal process.

For more details please contact the Terminal Vendor.

4. All Products must go through Mastercard's Terminal Quality Management (TQM) process prior to entering Mastercard's Terminal Integration Process (M-TIP). TQM is outsourced and managed by TUV Sud UK and can be initiated immediately after the Product has received the Level 1 Letter of Approval from EMVCo. For more details on TQM, vendors can contact Mastercard.TQM@tuv-sud.co.uk.
5. The Product Vendor must make all buyers of the Product aware of the above conditions and the below Product Technical Notes.

Product Technical Notes

1. The 'Mastercard Data Exchange' mechanism in a Product allows data to be exchanged between the Mastercard Contactless Reader kernel and the terminal application during the course of a payment transaction. During Mastercard testing the capability of the Product performed as expected using a test application in place of the final terminal application. However, as the Mastercard Contactless Reader kernel to terminal application interface remains specific to the reader's vendor, any terminal application developer intending to use this mechanism must work closely with the Mastercard Contactless Reader's vendor to ensure successful integration.

Date: December 8, 2021



Howard Zong

ID TECH
10721 Walker Street
Cypress CA 90630-4720
UNITED STATES OF AMERICA

Re: EMVCo Letter of Approval – Contactless Terminal Level 1 – Restricted Renewal

Approval Number: 16027 0218 260 26b 26b BCTC
PCD Identification: 80160100 **Version: Rev.A**
Hardware: 80160110 **Version: Rev.A**
Software: 80136120 **Version: Rev.B**
As tested in: Kiosk IV Version Rev A
PCD/Terminal Configuration: Samples are Intelligent Card Readers (ICR)
Analogue Test Cases: 3.0a **Digital Test Cases:** 3.0a **Interop Test Cases (Guideline):** 1.2.2
Renewal Date: December 31, 2025

Dear Howard Zong,

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for Level 1 terminal type approval for the proximity coupling device identified above. In connection with your request, we have reviewed your report, identified by file number TEMPL2169J1T Version V1.0 which was generated by Beijing Unionpay Card Technology Co.,Ltd (Bank Card Test Center).

After assessing such file, EMVCo has found reasonable evidence that the submitted samples of the above referenced proximity coupling device sufficiently conform to EMV® Level 1 Specifications for Payment Systems - EMV® Contactless Interface Specification, Version 3.0 of February 2018.

EMVCo hereby (a) grants your proximity coupling device EMVCo Type Approval for Terminal Level 1, based on the requirements stated in the EMV 3.0 Specifications, and (b) agrees to include your proximity coupling device in EMVCo's approved proximity coupling device list.

EMVCo's grant to your proximity coupling device is subject to and specifically incorporates (i) the General Terms and Conditions to the Letter of Approval enclosed as Exhibit A, and (ii) the Specific Terms and Conditions to the Letter of Approval attached hereto as Attachment 1. Because EMVCo's grant is subject to such limitations, including certain events of termination, you and any third parties should confirm that such approval is current and has not been terminated by referring to the list of approved proximity coupling devices published on the EMVCo website (www.emvco.com).

Analog performance being evaluated using Contactless Symbol as reference for the center of the operational volume this LoA is contingent on the EMVCo Contactless Symbol being present and in the "correct" location.

The "correct" location being the Center of the operating volume as identified by the vendor for EMVCo Type Approval unless especially agreed by EMVCo.

This Letter of Approval is valid while the approval number is posted on the EMVCo website.

EMVCo, LLC, a Delaware limited liability company

By: **Frederic Fortin**

Digitally signed by Frederic Fortin
Date: 2022.03.09 12:56:49 +01'00'

Name: Frédéric Fortin

Title: EMVCo Terminal Type Approval Chair

Attachment A

Specific Terms and Conditions to the Letter of Approval

Restrictions, if any:

Comments, if any:

This PCD is not compliant with some analogue requirements introduced in the new EMV specification v3.0.

EMVCo has assessed these non-compliances as acceptable during the global transition to this new specification as per the EMVCo Restricted Renewal process.

For more details please contact the Terminal Vendor.

EMV CERTIFICATIONS

ID TECH MODULE IV

For visa please click the link below and search I DTECH and you can see KIV expire date is 15 June

2026: <https://digitalpartnerservices.visaonline.com/Product/ChipCardAcceptanceDevices>

EMV: L1 and L2's (Brands)

Certification	Brand	File/Link	
L1 - Contactless	EMV Co	KIV Contactless L1_Renewed.pdf	December 31, 2025 TTA_Bulletin_No_222_2nd_E
L2 - Contactless	Amex	KIV AMEX.pdf	April 5, 2024
L2 - Contactless	Discover		June 25, 2021
L2 - Contactless	Mastercard	TLOA-IDTE230502-230616.pdf	June 15, 2027
L2 - Contactless	Visa	KIV Visa.pdf	June 15, 2026 <i>Please go to this link:</i> https://digitalpartnerservice Search for "Kiosk IV" to easi

digitalpartnerservices.visaonline.com/Product/ChipCardAcceptanceDevices											
Vindex											
Vendor	Product Reference	Product Name	Approved	Approval Notes	Approval Expiration	EMVCo Approval	VCPS Version	Visa Kernel	IRWIN	MSD	
Geidea for Technology	CDGDFT02642A	P01 V1.0	12 Apr 2024	N	12 Apr 2028	18682 0124 310 31a 31a BCTS	2.2	Visa Kernel V1.2.3	N	N	
Geidea for Technology	CDGDFT02710A	P02 V1.0	11 Jul 2024	N	12 Apr 2028	18826 0424 310 31a 31a BCTS	2.2	Visa Kernel V1.2.3	N	N	
ID Tech	CDIDTE01305A	Kiosk III Version 80136100 Rev.B	15 Jun 2018	N	15 Jun 2026	16009 0218 260 26b 26b BCTC	2.1.3	Visa VCPS 2.1.3 ODA Version v1.00	Y	Y	
ID Tech	CDIDTE01308A	Kiosk IV Version 80160100 Rev.A	15 Jun 2018	N	15 Jun 2026	16027 0218 260 26b 26b BCTC	2.1.3	Visa VCPS 2.1.3 ODA Version v1.00	Y	Y	
ID Tech	CDIDTE01419A	VP6800 Rev.A	31 Dec 2018	N	22 Jun 2026	16295 1018 260 26b 26b BCTC	2.2	Visa VCPS 2.2 Version 1.0	Y	N	
ID Tech	CDIDTE01458A	Kiosk III Rev.A	25 Mar 2018	N	15 Jun 2026	16372 1218 260 26b 26b BCTC	2.1.3	Visa VCPS 2.1.3 ODA	Y	Y	



Certification Project Completion



Monet+

certified for

ID Tech ViVOpay

Kiosk IV

No PIN

Certification date: 17-October-2022



Certification Data

Device vendor:	ID Tech
Device model:	ViVOPay Kiosk IV
Terminal Type:	UCAT (Unattended)
Processing gateway:	Monet+
EMVCo Contactless Level 1:	16027 0218 260 26b 26b BCTC
Visa Contactless Level 2:	CDIDTE01737
Mastercard Contactless Level 2:	TLOA-IDTE180301-180420(a)
Mastercard Level 3:	LMP_ULT_2210_026

Supported Parameters

Supported Cards:

Visa



Mastercard



Supported Interfaces:

Contactless



Supported Cardholder Verification Methods:

No CVM



Supported Countries:

	Austria		Latvia
	Belgium		Liechtenstein
	Bulgaria		Lithuania
	Croatia		Luxemburg
	Cyprus		Malta
	Czechia		Netherlands
	Denmark		Norway
	Estonia		Poland
	Finland		Portugal
	France		Romania
	Germany		San Marino
	Gibraltar		Slovakia
	Greece		Slovenia
	Hungary		Spain
	Iceland		Sweden
	Ireland		Switzerland
	Italy		United Kingdom
	Jersey		

Mastercard Certification Test Plan

Deployment country:	Gibraltar, Portugal, Iceland, Malta, Greece, Austria, Latvia, Netherlands, Sweden, Ireland, Luxembourg, Liechtenstein, Poland, Jersey, Slovakia, Slovenia, Bulgaria, France, Lithuania, Croatia, Romania, Hungary, United Kingdom, Switzerland, Spain, Czech Republic, Belgium, Norway, Finland, Denmark, Italy, San Marino, Germany, Estonia
Terminal Brand:	ID TECH
Terminal Model:	Kiosk IV Rev.A
Terminal Supplier Name:	ID TECH Japan Co., Ltd
Terminal Supplier Country:	Japan
Terminal Input Capability:	Contactless M/Chip
Deployment Type:	Newly deployed terminal
M-TIP LoA:	N/A
PCI Approval Number:	
M-TIP Test Tool name and version:	BTT 5.6.1
Mastercard Project Manager:	
Mastercard Project Number:	
Interface in scope of this M-TIP:	Contactless Interface
Additional DE55 Tags supported in 0100/0200:	9F33 (Terminal Capabilities)
Contactless LoA (Mastercard or EMVCo):	TLOA-IDTE180301-180420(a)
Contactless Terminal Configuration:	Standalone Intelligent Contactless card reader
Contactless Specification:	MCL 3.1.1
Mastercard Contactless Reader Application:	MasterCard PayPass M/Chip 3.1 v1.0
PCD TQM Label or Action Plan Ref.:	TQM1129/02
Environment of use:	Transit Open Loop Payment Acceptance - Type 1
Contact M-TIP LoA:	
Contactless Card Reader Brand:	ID TECH
Contactless Card Reader Model:	Kiosk IV/80160100 Rev.A
Contactless Card Reader Supplier Name:	ID Tech
Contactless Card Reader Supplier Country:	Japan
Contactless interface - Brands (AID) supported:	Maestro, Mastercard

Acceptance environment:	MCC 4111 (Transportation-Suburban and Local Commuter Passenger)
Contactless Interface - Relay Resistance Protocol (RRP) activated:	Yes
Contactless interface - Additional features supported:	Fixed amounts
Contactless interface - Mastercard - Integrated Data Storage supported:	False
Contactless interface - Mastercard - Consumer Device Cardholder Verification Method (CDCVM) supported:	False
Contactless interface - Mastercard - Transaction Limit (CDCVM) value:	5000
Contactless interface - Mastercard - Transaction Limit (No CDCVM) value:	5000
Contactless interface - Mastercard - CVM Required Limit value:	5000
Contactless interface - Mastercard - Floor Limit value:	5000
Contactless interface - Mastercard - 9F1D CVM Exempt:	True
Contactless interface - Mastercard - 9F1D CDCVM bypass requested:	False
Contactless interface - Maestro - Integrated Data Storage supported:	False
Contactless interface - Maestro - Consumer Device Cardholder Verification Method (CDCVM) supported:	False
Contactless interface - Maestro - Transaction Limit (CDCVM) value:	5000
Contactless interface - Maestro - Transaction Limit (No CDCVM) value:	5000
Contactless interface - Maestro - CVM Required Limit value:	5000
Contactless interface - Maestro - Floor Limit value:	5000
Contactless interface - Maestro - 9F1D CVM Exempt:	True
Contactless interface - Maestro - 9F1D CDCVM bypass requested:	False

Visa Certification Test Plan

Deployment country:	Gibraltar, Portugal, Iceland, Malta, Greece, Austria, Latvia, Netherlands, Sweden, Ireland, Luxembourg, Liechtenstein, Poland, Jersey, Slovakia, Slovenia, Bulgaria, France, Lithuania, Croatia, Romania, Hungary, United Kingdom, Switzerland, Spain, Czech Republic, Belgium, Norway, Finland, Denmark, Italy, San Marino, Germany, Estonia
Modes of testing performed:	[Contactless testing]
Type of deployment:	Transit – Mobility and Transport Transaction (MTT)
Payment application Name and Version:	VISA Transit v1.1 v1.00
EMVCo L1 Contactless PCD Approval Number:	16027 0218 260 26b 26b BTC
EMVCo or VISA L2 Contactless Product Approval Reference Number:	CDIDTE01737
Does the transit kernel support the VISA Contactless Transit Kernel Specification (VCTKS) version 1.1 or above?	False

TRANSLATION FROM ENGLISH INTO ROMANIAN/TRADUCERE DIN ENGLEZĂ ÎN ROMÂNĂ

Finaro, Anterior Credorax-/-

Finalizarea proiectului de omologare-/-

Monet+, omologat pentru ID Tech VIVOpay, Kiosk IV, No PIN-/-

Data omologării; 17 octombrie 2022-/-

Proprietatea Finaro și confidențial-/-

Finaro-/-

Date privitoare la omologare-/-

Furnizorul dispozitivului: ID Tech-/-

Modelul dispozitivului: ViVOpay Kiosk IV-/-

Tip terminal: UCAT, nesupravegheat-/-

Interfața de procesare: Monet +-/-

EMVCo fără contact, nivel 1: 16027 0218 260 26b 26b BCTC-/-

Visa fără contact Nivel 2: CDIDTE01737-/-

Mastercard fără contact Nivel 2: TLOA-IDTE180301-180420(a) -/-

Parametrii suportați-/-

Carduri acceptate: Visa Mastercard-/-

Interfețe acceptate: Fără contact-/-

Metode acceptate pentru verificarea titularului de card: fără CVM-/-

Țări acceptate:

Austria, Letonia, Belgia, Liechtenstein, Bulgaria, Lituania, Croația, Luxemburg, Cipru, Malta, Cehia, Țările de Jos, Danemarca, Norvegia, Estonia, Polonia, Finlanda, Portugalia, Franța, România, Germania, San Marino, Gibraltar, Slovacia, Grecia, Slovenia, Ungaria, Spania, Islanda, Suedia, Irlanda, Elveția, Italia, Regatul Unit, Jersey. -/-

Planul de testare a omologării Mastercard-/-

Țara de desfășurare: Gibraltar, Portugalia, Islanda, Malta, Grecia, Austria, Letonia, Țările de Jos, Suedia, Irlanda, Luxemburg, Liechtenstein, Polonia, Jersey, Slovacia, Slovenia, Bulgaria, Franța, Lituania, Croația, România, Ungaria, Regatul Unit, Elveția, Spania, Republica Cehă, Belgia, Belgia, Norvegia, Finlanda, Danemarca, Italia, San Marino, Germania, Estonia-/-

Marca terminalului: ID TECH-/-

Modelul terminalului: Kiosk IV Rev.A-/-

Numele furnizorului terminalului: ID TECH Japan Co., Ltd. -/-

Țara furnizorului de terminale: Japonia-/-

Capacitatea de intrare a terminalului: M/Chip fără contact-/-

Tip de implementare: Terminal nou implementat-/-

M-TIP LoA: N/A-/-

Numărul de aprobare PCI: -/-

M-TIP Numele și versiunea instrumentului de testare M-TIP: BTT 5.6.1-/-

Manager de proiect Mastercard: -/-

Numărul proiectului Mastercard: -/-

Interfața care intră în domeniul de aplicare al prezentului M-TIP: Interfața fără contact-/-

Etichete DE55 suplimentare acceptate în 0100/0200: 9F33 (capacități ale terminalului) -/-

LoA fără contact (Mastercard sau EMVCo): TLOA-IDTE180301-180420(a) -/-

Configurația terminalului fără contact: Cititor de carduri inteligent, fără contact și autonom-/-

Specificații privitoare la terminal fără contact: MCL 3.1.1.1-/-

Aplicație Cititor fără contact Mastercard: MasterCard PayPass M/Chip 3.1 v1.0-/-

Eticheta sau planul de acțiune PCD TQM Ref.: TQM1129/02-/-

Mediul de utilizare: Acceptarea plășilor în buclă deschisă în tranzit - Tip 1-/-



Contact M-TIP LoA: -/-

Cititor de carduri fără contact Marca: ID TECH/-

Modelul cititorului de carduri fără contact: Kiosk IV/80160100 Rev.A/-

Nume: Furnizor de carduri cu carduri fără contact: ID Tech/-

Țara de proveniență a furnizorului cititorului de carduri fără contact: Japonia/-

Interfață fără contact - mărci (AID) acceptate: Maestro, Mastercard/-

Mediul de acceptare: MCC 4111 (Transporturi - Transporturi suburbane și de naveta locală a pasagerilor) -/-

Interfață fără contact - releu. Protocol de rezistență (RRP) activat: Da/-

Interfață fără contact - caracteristici suplimentare suportate: Sume fixe/-

Interfață fără contact - Mastercard -Stocare integrată a datelor acceptate: Fals/-

Interfață fără contact - Mastercard - Metoda de verificare a dispozitivului de consum al titularului de card: Metoda de verificare acceptată (CDCVM): Fals/-

Interfață fără contact - Mastercard -Valoarea limită a tranzacției (CDCVM): 5000/-

Interfață fără contact - Mastercard -Limita de tranzacție (fără CDCVM) valoare: 5000/-

Interfață fără contact - Mastercard - Limita necesară CVM valoare: 5000/-

Interfață fără contact - Mastercard - Valoare limită minimă: 5000/-

Interfață fără contact - Mastercard -9F1D CVM Scutit: Adevărat/-

Interfață fără contact - Maestro - Suportă stocarea integrată a datelor: Fals/-

Interfață fără contact Maestro: metoda acceptată de verificare a dispozitivului de consum al titular de card (CDCVM): Fals/-

Interfață fără contact - Maestro -Valoarea limită a tranzacției (CDCVM): 5000/-

Interfață fără contact - Maestro - Limita tranzacției (fără CDCVM) valoare: 5000/-

Interfață fără contact - Maestro - CVM - Valoarea limită necesară: 5000/-

Interfață fără contact - Maestro - Valoare minimă limită: 5000/-

Interfață fără contact - Maestro - 9F1D Scutit de CVM: Adevărat/-

Interfață fără contact - Maestro - 9F1D Bypass CDCVM solicitat: Fals/-

Planul de testare pentru certificarea vizelor/-

Țara de desfășurare: Gibraltar, Portugalia, Islanda, Malta, Grecia, Austria, Letonia, Țările de Jos, Suedia, Irlanda, Luxemburg, Liechtenstein, Polonia, Jersey, Slovacia, Slovenia, Bulgaria, Franța, Lituania, Croația, România, Ungaria, Regatul Unit, Elveția, Spania, Republica Cehă, Belgia, Norvegia, Finlanda, Danemarca, Italia, San Marino, Germania, Estonia/-

Modalități de testare efectuate: [Încercare fără contact] -/-

Tipul de desfășurare: Tranzit - Tranzacție de mobilitate și transport (MTT) -/-

Aplicație de plată Denumire și Versiune: VISA Transit v1.1 v1.00/-

Număr de aprobare EMVCo L1 fără contact PCD: 16027 0218 260 26b 26b BCTC/-

EMVCo sau VISA L2 Număr de omologare a produsului fără contact: CDIDTE01737/-

Nucleul de tranzit acceptă VISA Contactless Transit fără contact (VCTKS) versiunea 1.1 sau o versiune superioară? Fals/-

End of translation/Încheierea traducerii-----

Certification on back/Autorizarea pe verso.

Subsemnata, ABRUDAN CACIORA SIMONA VERONICA, traducător autorizat de Ministerul Justiției cu nr. 3489/2008, certific exactitatea acestei traduceri în limba română, conformă cu textul înscrisului original copie legalizata copie xerox copie fax cu semnatura autorizata cu semnatura privata din extras in limba engleza, vizat de mine.

I, ABRUDAN CACIORA SIMONA VERONICA, a sworn translator, authorized by the Ministry of Justice under the number 3489/17th of November 2008, do hereby certify that this is an accurate translation of the original text legal transcript photocopy fax copy with personal signature in extract, from the English language, which was visaed by me.



ROMANIA
BIROUL NOTARULUI PUBLIC/ NOTARY PUBLIC'S OFFICE

CONCLUSION OF LEGALIZATION FOR THE TRANSLATOR'S SIGNATURE/
ÎNCHIEIERE DE LEGALIZARE A SEMNĂTURII TRADUCĂTORULUI
No/Nr. Date/Data

I _____, notary public, undersigned, pursuant to provisions of Article 8, letters "e" and "j" of Act no. 178/1997, legalize the above signature of ABRUDAN CACIORA SIMONA VERONICA, a sworn translator for the English language, authorization no. 3489/17.11.2008, on _____ copies of the document.

Received:

Tax _____ lei, receipt no. _____

Notary fee _____ lei, receipt no. _____

Judiciary stamp _____ lei.

Subsemnatul _____, notar public, în temeiul art.8, lit. e și j din Legea 178/1997 legalizează semnătura, de mai sus a traducătorului autorizat, Abrudan Caciora Simona Veronica, în baza specimenului de semnătură lăsat la biroul meu, pe cele _____ exemplare ale traducerii.

S-a perceput onorariul de _____ lei, _____ cu _____ chitanța _____ nr. _____

NOTARY PUBLIC/ NOTAR PUBLIC

EU Declaration of Conformity

In accordance with EU Directives and Regulations

Shenzhen Xinguodu Technology Co., Ltd.

Address: 17B JinSong Mansion, Terra Industrial & Trade Park Chegongmiao, Futian District, Shenzhen, Guangdong, China.

as the manufacturer, hereby declares under our sole responsibility that
product(s): Smart POS terminal

Model name: N86

is in conformity with the essential requirements of the Radio Equipment Directive 2014/53/EU:

Radio	EN 300 330 V2.1.1 (2017-02)
Article 3.2	EN 301 908-1 V15.2.1 (2023-01)
	EN 301 908-2 V13.1.1 (2020-06)
	EN 301 908-13 V13.2.1(2022-02)
	ETSI TS 136 521-1 V17.5.0 (2023-01)
	EN 300 328 V2.2.2 (2019 -07)
	EN 301 511 V12.5.1 (2017-03)
	EN 303 413 V1.2.1 (2021-04)

EMC	EN 301 489-1 V2.2.3 (2019-11)
Article 3.1(b)	EN 301 489-3 V2.3.2(2023-01)
	EN 301 489-17 V3.2.4(2020-09)
	EN 301 489-19 V2.2.1(2022-09)
	EN 301 489-52 V1.2.1 (2021-11)

Safety	EN IEC 62368-1:2020+A11:2020
Article 3.1(a)	

Health	
Article 3.1(a)	EN 50566:2017
	EN 62479:2010
	EN 50663:2017

The notified body Bay Area Compliance Labs Corp.(BACL) (EU Identification Number: 1313) performed a conformity assessment according to Annex III, Module B.

Signed on behalf of Shenzhen Xinguodu Technology Co., Ltd.


(Signature of authorized person)

Printed Name: Huang Fenglan

Title: Certification manager

Date: 2023-02-28



Terminal Quality Management Statement of Compliance

Page 1/2

This is to confirm that Mastercard Approval Authority
has approved the following Terminal Components submitted by

Shenzhen Xinguodu Technology Co., Ltd.

17B JinSong Mansion
Terra Industrial & Trade Park Chegongmiao
Futian District
Shenzhen
Guangdong
China

in conformity with Terminal Quality Management requirements.

Type	EMVCo Level 1 LoA	Mastercard TQM Label	IFM or PCD Identification	Manufacturing Sites (p.2)	<u>As tested in,</u> As manufactured as
IFM	18788 0324 100 10a 10a BCTS	TQM1608/01	N86-IFM Version V1.7	1	N86 Version V1.7 N86
PCD	18828 0424 310 31a 31a BCTS	TQM1608/02	N86-PCD Version V1.7	1	N86 Version V1.7 N86

For
Mastercard
Security Standards and Solutions

This Letter is valid August 13, 2026

Bruno PARFUM
Director, Product Development Services



Terminal Quality Management Statement of Compliance

Page 2/2

The Mastercard Approval Authority is granting this Statement of Compliance together with TQM Label(s) in relation to the Component(s) for the validity period specified on Page 1.

Any change to the Component(s) must be promptly notified to the Mastercard Approval Authority. Failing to comply with such notification or request(s) may result in this Statement of Compliance to be terminated by Mastercard.

The Mastercard TQM Labels are only valid in conjunction with the EMVCo level 1 letter of approval or PayPass Level 1 test assessment bearing the same reference.

This Statement of Compliance together with the related TQM Label(s) is provided by Mastercard Europe sprl. ("Mastercard") to record compliance of the Component(s) with Mastercard TQM Requirements.

Under no circumstances do the Mastercard Statement of Compliance and related TQM Label(s) constitute or imply any endorsement, representation or warranty from Mastercard as to the Component(s) or any other product made available by the Vendor including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by Mastercard. The Vendor is solely liable for claims arising from the use, sale or supply of the Components.

This Statement of Compliance is subject to Belgian law.

Manufacturing Sites:

- 1 Shenzhen Xinguodu Technology Co., Ltd.
Manufacture Branch
Fourth floor, fifth floor, 401, 501, C Building
Dagang industrial Zone Changzhen Community
Yutang Street
Guangming District
Shenzhen
Guangdong
China
- 2 Shenzhen Haiye Chuangxing Technology Co., Ltd
The third and fifth floors of Building A
New Era Gongrong Industrial Park
No. 2 Shilong Road
Shilong Community
Shiyan Street
Bao'an District
Shenzhen
China
- 3 Huaguan Technology (Heyuan) Co., Ltd.
Huaguan Science and Technology Park,
West of Xingye Avenue,
North of Gaoxin 7th Road,
Heyuan National High-tech Development Zone,
GuangDong,
China

Hui Lin

Shenzhen Xinguodu Technology Co. Ltd
17B JinSong Mansion, Terra Industrial & Trade Park Chegongmi
Shenzhen 518040
CHINA

Re: EMVCo Letter of Approval – Contactless Terminal Level 1

Approval Number: **18828 0424 310 31a 31a BCTS**

PCD Identification: **N86-PCD** *Version:* **V1.7**

Hardware: **XGDN86HW-PCD** *Version:* **V1.7**

Software: **XGDN86SW-PCD** *Version:* **V2.0**

As tested in: **N86 Version V1.7**

PCD/Terminal Configuration: **Samples are Fully Integrated Terminals (FIT)**

Analogue Test Cases: **3.1a** *Digital Test Cases:* **3.1a** *Interop Test Cases (Guideline):* **1.2.2**

Renewal Date: **April 7, 2028**

Dear Hui Lin,

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for Level 1 terminal type approval for the proximity coupling device identified above. In connection with your request, we have reviewed your report, identified by file number TEMPL2415N1T Version V1.0 which was generated by Beijing Unionpay Card Technology Co., Ltd. Shenzhen Branch.

After assessing such file, EMVCo has found reasonable evidence that the submitted samples of the above referenced proximity coupling device sufficiently conform to EMV® Level 1 Specifications for Payment Systems - EMV® Contactless Interface Specification, Version 3.1 of December 2020.

EMVCo hereby (a) grants your proximity coupling device EMVCo Type Approval for Terminal Level 1, based on the requirements stated in the EMV 3.1 Specifications, and (b) agrees to include your proximity coupling device in EMVCo's approved proximity coupling device list.

EMVCo's grant to your proximity coupling device is subject to and specifically incorporates (i) the General Terms and Conditions to the Letter of Approval enclosed as Exhibit A, and (ii) the Specific Terms and Conditions to the Letter of Approval attached hereto as Attachment 1. Because EMVCo's grant is subject to such limitations, including certain events of termination, you and any third parties should confirm that such approval is current and has not been terminated by referring to the list of approved proximity coupling devices published on the EMVCo website (www.emvco.com).

Analog performance being evaluated using Contactless Symbol as reference for the center of the operational volume this LoA is contingent on the EMVCo Contactless Symbol being present and in the "correct" location.

The "correct" location being the Center of the operating volume as identified by the vendor for EMVCo Type Approval unless especially agreed by EMVCo.

This Letter of Approval is valid while the approval number is posted on the EMVCo website.

EMVCo, LLC, a Delaware limited liability company

By:

Name: Frédéric Fortin

Title: EMVCo Terminal Testing Group Chair

Attachment A

Specific Terms and Conditions to the Letter of Approval

Restrictions, if any:

Comments, if any:

Hui Lin

Shenzhen Xinguodu Technology Co. Ltd
17B JinSong Mansion, Terra Industrial & Trade Park Chegongmi
Shenzhen 518040
CHINA

Re: EMVCo Letter of Approval – Contact Terminal Level 1

Approval Number: **18788 0324 100 10a 10a BCTS**

IFM Identification: **N86-IFM**

Version: **V1.7**

Hardware: **XGDN86HW-IFM**

Version: **V1.7**

Software: **XGDN86SW-IFM**

Version: **V2.0**

As tested in: **N86 Version V1.7**

Electrical & Mechanical Test Cases: **1.0a**

Protocol Test Cases: **1.0a**

Renewal Date: **March 12, 2028**

Dear Hui Lin,

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for Level 1 terminal type approval for the interface module identified above. In connection with your request, we have reviewed your report, identified by file number TEMC240S31T Version V1.0 which was generated by Beijing Unionpay Card Technology Co., Ltd. Shenzhen Branch.

After assessing such file, EMVCo has found reasonable evidence that the submitted samples of the above referenced interface module sufficiently conform to EMV® Level 1 Specifications for Payment Systems, EMV Contact Interface Specification, Version 1.0, October 2022.

EMVCo hereby grants your interface module EMVCo Type Approval for Terminal Level 1, based on the requirements stated in the EMV 1.0 Specifications. Please note that EMVCo may publicly identify your interface module as an approved interface module, including in EMVCo's published list of approved interface modules.

EMVCo's grant to your interface module is subject to and specifically incorporates (i) the General Terms and Conditions to the Letter of Approval enclosed as Exhibit A, and (ii) the Specific Terms and Conditions to the Letter of Approval attached hereto as Attachment 1. Because EMVCo's grant is subject to such limitations, including certain events of termination, you and any third parties should confirm that such approval is current and has not been terminated by referring to the list of approved interface modules published on the EMVCo website (www.emvco.com).

Please note that EMVCo makes certain logos available for use in connection with an interface module that has received EMVCo approval. To obtain permission to use the "EMV Approved" certification mark, please contact EMVCo to request a license agreement

This Letter of Approval is valid while the approval number is posted on the EMVCo website.

EMVCo, LLC, a Delaware limited liability company

By:

Name: Frédéric Fortin

Title: EMVCo Terminal Testing Group Chair

Attachment A

Specific Terms and Conditions to the Letter of Approval

Restrictions, if any:

Comments, if any:

July 16, 2025

Mr. Hui Lin

Shenzhen Xinguodu Technology Co.,Ltd.

17B JinSong Mansion, Terra Industrial & Trade Park Chegongmiao,
Futian District, Shenzhen,Guangdong, China.

Shenzhen 518040

China

Re: EMVCo Letter of Approval - Contact Terminal Level 2

EMV Application Kernel: XGD-EMVCT Version V4.4

Approval Number(s):
2-05623-1-1C-BCTS-0725-4.4c
2-05623-1-2C-BCTS-0725-4.4c
2-05623-1-3C-BCTS-0725-4.4c
2-05623-1-4C-BCTS-0725-4.4c
2-05623-1-5C-BCTS-0725-4.4c
2-05623-1-6C-BCTS-0725-4.4c
2-05623-1-7C-BCTS-0725-4.4c
2-05623-1-8C-BCTS-0725-4.4c
2-05623-1-9C-BCTS-0725-4.4c
2-05623-1-1P-BCTS-0725-4.4c
2-05623-1-2P-BCTS-0725-4.4c
2-05623-1-1OS-BCTS-0725-4.4c

The EMV Application Kernel has been tested on the following terminal

Terminal: N86

PinPad: 1P = N86, XGD-EMVCT - PIN pad is valid for configuration(s): 1C, 2C, 3C, 4C, 5C, 6C, 8C, 9C

2P = K110, K110 V1.1 - PIN pad is valid for configuration(s): 7C

Operating System: 1OS = XAP OS Version V1.0

Renewal Date: 15-Jul-2029

Report ID Session 1: TEMV252LS1T Version V1.0 - Beijing Unionpay Card Technology Co., Ltd.

Kernel Checksum:

9E C4 7B 63

Configurations Checksums:

Config	Vendor Config ID	Terminal	Checksum
1C	XGDEM V CFG	22	00 7B 51 E9
2C	XGDEM V CFG2	22	62 88 90 D3
3C	XGDEM V CFG3	22	FD 4D 1C 70
4C	XGDEM V CFG4	25	C2 5D C9 03
5C	XGDEM V CFG5	25	77 AE 4B E4
6C	XGDEM V CFG6	22	21 5D 88 49
7C	XGDEM V CFG7	22	43 81 6D 79
8C	XGDEM V CFG8	14	40 9B D8 BF
9C	XGDEM V CFG9	14	66 D4 3E AB

PIN Pads Checksums:

PinPad	Checksum
1P	9E C4 7B 63
2P	N/A

Dear Mr. Lin:

EMVCo, LLC ("EMVCo"), a Delaware limited liability company, has received your request for Level 2 terminal type approval for the EMV Application Kernel identified above (hereafter referred to as the "Application"). In connection with your request, we have reviewed all test file number(s) listed above.

After assessing such file(s), EMVCo has found reasonable evidence that the submitted samples of the above referenced Application sufficiently conform to EMV Integrated Circuit Card Specifications for Payment Systems, Version 4.4 of October 2022.

EMVCo hereby grants your Application EMVCo Type Approval for Terminal Level 2, based on the requirements stated in the EMV 4.4 Specifications. Please note that EMVCo may publish this letter and publicly identify your Application as an approved Application, including in EMVCo's published list of approved Applications.

EMVCo's grant to your Application is subject to and specifically incorporates (i) the General Terms and Conditions to the Letter of Approval enclosed as Exhibit A, and (ii) the Specific Terms and Conditions to the Letter of Approval attached hereto as Attachment 1. Because EMVCo's grant is subject to such limitations, including certain events of termination, you and any third parties should confirm that such approval is current and has not been terminated by referring to the list of approved Applications published on the EMVCo website (www.emvco.com).

Please note that EMVCo makes certain logos available for use in connection with an Application that has received EMVCo approval. To obtain permission to use the "EMV Approved" certification mark, please contact EMVCo to request a license agreement.

This Letter of Approval is valid while the approval number is posted on the EMVCo website.

Authorised by Frédéric Fortin
Terminal Testing Group Chair
EMVCo, LLC

Note:

The Random Number Generator is part of the EMV specifications. This Contact Level 2 Kernel utilizes a specific Hardware component in the tested terminal to generate random numbers. To be EMV compliant, this Contact Level 2 Kernel shall be used in conjunction with terminals having this specific hardware component.

Terminal Capabilities	1C	2C	3C	4C	5C	6C	7C	8C	9C	
Card Data Input Capability										
Terminal Type	22	22	22	25	25	22	22	14	14	
Manual Key Entry	Yes	Yes	Yes	No	No	Yes	Yes	No	No	
Magnetic Stripe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
IC with Contacts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
CVM Capability										
Plaintext PIN	Yes	Yes	Yes	No	No	Yes	Yes	No	No	
Online Enciphered PIN	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	
Signature (Paper)	Yes	Yes	Yes	No	No	Yes	Yes	No	No	
Offline Enciphered PIN (RSA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
No CVM	Yes	No	No	Yes	Yes	Yes	Yes	No	No	
Offline Enciphered PIN (ECC)	No	No	No	No	No	No	No	No	No	
Biometric	No	No	No	No	No	No	No	No	No	
Offline Finger	No	No	No	No	No	No	No	No	No	
Online Finger	No	No	No	No	No	No	No	No	No	
Offline Facial	No	No	No	No	No	No	No	No	No	
Online Facial	No	No	No	No	No	No	No	No	No	
Offline Palm	No	No	No	No	No	No	No	No	No	
Online Palm	No	No	No	No	No	No	No	No	No	
Offline Iris	No	No	No	No	No	No	No	No	No	
Online Iris	No	No	No	No	No	No	No	No	No	
Offline Voice	No	No	No	No	No	No	No	No	No	
Online Voice	No	No	No	No	No	No	No	No	No	
Security Capability										
SDA & DDA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
Card Capture	No	No	No	No	No	No	No	No	No	
CDA	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	Mode 1	No	Mode 2	
XDA	No	No	No	No	No	No	No	No	No	
Transaction Type Capability										
Tran Type - Cash	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	
Tran Type - Goods	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tran Type - Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tran Type - Cash Back	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	
Tran Type - Inquiry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tran Type - Transfer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tran Type - Payment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tran Type - Admin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Tran Type - Cash Deposit	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Terminal Data Input Capability										
Keypad	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Numeric Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Alpha and Special Character Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Command Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Function Keys	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

(continued)	1C	2C	3C	4C	5C	6C	7C	8C	9C	
Terminal Data Output Capability										
Print	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Code Table 10	No	No	No	No	No	No	No	Yes	Yes	
Code Table 9	No	No	No	No	No	No	No	Yes	Yes	
Code Table 8	No	No	No	No	No	No	No	Yes	Yes	
Code Table 7	No	No	No	No	No	No	No	Yes	Yes	
Code Table 6	No	No	No	No	No	No	No	Yes	Yes	
Code Table 5	No	No	No	No	No	No	No	Yes	Yes	
Code Table 4	No	No	No	No	No	No	No	Yes	Yes	
Code Table 3	No	No	No	No	No	No	No	Yes	Yes	
Code Table 2	No	No	No	No	No	No	No	Yes	Yes	
Code Table 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Application Selection										
PSE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cardholder Confirmation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Preferred display order	No	No	No	No	No	No	No	Yes	Yes	
Partial AID Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Multi language	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
EMV Language Selection method	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Common Character Set	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Data Authentication										
Revocation of Issuer PK Certificate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Certificate Revocation List Format	RID+CAPKI +CSN	RID+CAPKI +CSN	RID+CAPKI +CSN	RID+CAPKI +CSN	RID+CAPKI +CSN	RID+CAPKI +CSN	RID+CAPKI +CSN			
Default DDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
Cardholder Verification Method										
Bypass PIN Entry	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	
Subsequent Bypass PIN Entry	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	
Get Data for PIN Try Counter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
Fail CVM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Amount known before CVM proces.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Terminal Risk Management										
Floor Limit Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
Random Transaction Selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Velocity Checking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Transaction Log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Exception File	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
TRM irrespective of AIP setting (expected behavior)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

(continued)	1C	2C	3C	4C	5C	6C	7C	8C	9C	
Terminal Action Analysis										
Terminal Action Codes supported	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TAC can be deleted or disabled	No	No	No	No	No	No	No	Yes	Yes	
How does offline only Terminal process Default Action Codes?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
How does online only terminal process TAC/IAC-Default when unable to go online?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Skipped	Skipped	
Completion Processing										
Forced Online	Yes	Yes	Yes	No	No	Yes	Yes	No	No	
Forced Acceptance	Yes	Yes	Yes	No	No	Yes	Yes	No	No	
Voice Referrals Initiated by Issuer	Yes	Yes	Yes	No	No	Yes	Yes	No	No	
Default TDOL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Default TDOL not configured	No	No	No	No	No	No	No	Yes	Yes	
Exception Handling										
POS Entry Mode	92	92	92	92	92	80	92	80	80	
Miscellaneous										
Amount and PIN on same keypad	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	
ICC/Magstripe Reader Combined	No	No	No	No	No	No	No	No	No	
Supports account type selection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	
Supports 'on fly' script processing	No	No	No	No	No	No	No	No	No	
Issuer Script device limit > 128 bytes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
If limit > 128, value supported?	0	0	0	0	0	0	0	0	0	
Internal Date Management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Does the terminal support Receipt?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Attachment 1

Specific Terms and Conditions to the Letter of Approval

Restriction:

None

Conditions:

This product is not able to handle transaction date beyond the 31st of December 2037.

Mastercard
2000 Purchase Street
Purchase, NY 10577
USA



Shenzhen Xinguodu Technology Co.,Ltd
17B, Jinsong Building, Tairan Industry And Trading Garden, Shenzhen,
Guangdong,
518057 China

May 15, 2024

Mastercard Contactless Reader Vendor Product – Letter of Approval

LoA Identifier: TLOA-XING240301-240515(a)
Product Vendor: Shenzhen Xinguodu Technology Co.,Ltd
Product Type: Fully Integrated Terminal
LoA Expiration Date: May 13, 2028

Product Identification	Terminal
Product Commercial Name	N86 V1.7
Product Technical Name	N86 V1.7
Application Selection Module	XGD-APPSM V1.0
Mastercard Contactless Kernel	XGD-MCL V3.2
Operating System	XAP OS V1.0
Product Registration Number	FIT-XING-240301

EMVCo Contactless LoA Level 1:	18828 0424 310 31a 31a BCTS
Test Assessment Level 2:	TTAR-XING240301-BCT-2405-T063

Supported Options	
PIN Entry Device	Yes
Contactless Mag-stripe	Yes
Send POI information	Yes
C-2 Spec Bulletin 261	Yes
Data Exchange / Data Storage	Yes
Integrated Data Storage and Torn Transaction	Not Applicable

Please contact the product vendor to obtain the full description of all the technical features supported by the product.

Under the terms of the Mastercard Contactless Specification License Agreement entered into between Mastercard Europe S.A. (formerly known as Mastercard Europe sprl) and Product Vendor on October 6, 2010 ("**Agreement**"), Product Vendor is required to submit its Implementation (as defined in the Agreement) to Mastercard or, to a third party designated by Mastercard ("**Testing Laboratory**"), for testing and certification prior to being permitted to sell, offer to sell, distribute, supply or otherwise provide ("**Commercialize**") any Implementation (as defined in the Agreement) in accordance with the Agreement.

This Letter of approval ("**LoA**") documents the fact that the Product Vendor has submitted the product (referenced above) ("**Product**") to Mastercard or, to a third party designated by Mastercard, for testing and certification in accordance with the Agreement but is not, and should not be interpreted as, an approval of the Product.

Subject to Product Vendor fully complying with the Conditions of Approval set out in Appendix 1 of this LoA, this LoA permits the Product Vendor to advise its customers that the Product has, in Mastercard's assessment opinion (and/or the Testing Laboratories

assessment opinion, if applicable), appeared to satisfy the requirements of the Specification set out in Appendix 1.

THIS LETTER DOES NOT CONSTITUTE AN ENDORSEMENT OR WARRANTY OF ANY KIND WITH RESPECT TO THE PRODUCT, ITS SECURITY OR FUNCTIONALITY.

MASTERCARD MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. WITHOUT LIMITATION OF THE FOREGOING, MASTERCARD SPECIFICALLY DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES: (I) REGARDING THE FUNCTIONALITY, SECURITY, QUALITY AND PERFORMANCE OF THE PRODUCT; (II) WITH RESPECT TO ANY THIRD PERSON INTELLECTUAL PROPERTY RIGHTS. PRODUCT VENDOR ASSUMES THE ENTIRE RISK ARISING OUT OF THE USE OF AND/OR RELIANCE ON THE PRODUCT.

The Product Type will be listed on the Mastercard customer portal until the LoA Expiration Date (referred to above). Any change to the Product Type must be promptly notified to Mastercard in writing.

Mastercard reserves the right to use a Product that has been granted a LoA as a reference for future testing, certification or approval of other Mastercard Contactless products.

Yours sincerely,

Bruno Parfum
Director, Product Approvals
Cyber & Intelligence Solutions

Appendix 1

Specifications and References

For the purpose of this LoA, the following documents will be deemed to be the "Specifications":

Fully Integrated Terminal
Mastercard Contactless Reader Specification - Version 3.1.4 - November 2020
EMV Book C-2 - Kernel 2 Specification - Version 2.10 - March 2021
EMV C2 v2.10 Specification bulletin 261 - October 2021
Mastercard Contactless Performance Requirement – Application Note #7 – March 2014

Conditions of Approval

The Product Vendor hereby agrees to comply with the following conditions in order for this LoA to be valid and before it is permitted to Commercialize the Product:

1. This LoA may be updated by Mastercard (in its sole discretion): (a) if Mastercard receives additional information from the Product Vendor about the Product; (b) in the event that Mastercard has a reasonable belief that the Product has a material defect (whether such defect is to hardware or software); (c) if Mastercard deems appropriate as a result of any activity that causes non-compliance with the Specification or any security issue arising with the Product; or (e) if otherwise reasonably required by Mastercard.
2. During the term of the LoA, the Product Vendor shall ensure that all versions of the Product produced must be materially identical with the samples of the Product that were submitted for testing to Mastercard and to which this LoA relates. Any change in any version of the Product that, in Mastercard's sole opinion, generates a different behavior of the Product that was submitted to Mastercard for testing and to which this LoA relates will be considered a material modification (whether such modification is to hardware or software) to the Product (for which this LoA does not apply to) and must be resubmitted to Mastercard for testing and approval.
3. If the Product supports PIN Entry, new installations of the Product must use models with a valid PCI PTS approval. The validity of the PCI PTS approval can be verified on PCI SSC web site. For more details on the Mastercard PIN Entry Device standards please contact POL_security@mastercard.com.
4. All Products must go through Mastercard's Terminal Quality Management (TQM) process prior to entering Mastercard's Terminal Integration Process (M-TIP). TQM is outsourced and managed by TUV Sud UK and can be initiated immediately after the Product has received the Level 1 Letter of Approval from EMVCo. For more details on TQM, vendors can contact Mastercard.TQM@tuvsud.com.
5. The Product Vendor must make all buyers of the Product aware of the above conditions and the below Product Technical Notes.

Product Technical Notes

1. The 'Mastercard Data Exchange' mechanism in a Product allows data to be exchanged between the Mastercard Contactless Reader kernel and the terminal application during the course of a payment transaction. During Mastercard testing the capability of the Product performed as expected using a test application in place of the final terminal application. However, as the Mastercard Contactless Reader kernel to terminal application interface remains specific to the reader's vendor, any terminal application developer intending to use this mechanism must work closely with the Mastercard Contactless Reader's vendor to ensure successful integration.



June 02, 2025

Hui Lin
Shenzhen Xinguodu Technology Co. Ltd
17B JinSong Mansion, Terra Industrial & Trade Park Chegongmiao,
Futian District, Shenzhen,Guangdong, China.

RE: Visa Reference Number: CDXTCL02924B

Dear Hui Lin,

We are pleased to advise you that Visa has approved the product identified by the above Visa Reference Number ("the Product") for inclusion in Visa's Approved Products List subject to the conditions set forth herein:

When granted, Visa approval is provided to ensure certain security and operational characteristics important to Visa's systems as a whole, but Visa approval does not under any circumstances include any endorsement, guarantee or warranty regarding the functionality, quality, security or performance of any particular product or service. Visa does not warrant any products or services provided by other parties. Visa approval does not under any circumstances include or imply any product warranties from Visa, including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by Visa.

Specifically, Visa has approved the following product

PRODUCT

Manufacturer:	Shenzhen Xinguodu Technology Co. Ltd
Product Name:	N86 V1.7
Product Configuration:	PCDI (Internal Reader)/FIT
Visa Kernel Software:	XGDVCPS V1.1
EMVCo Contactless Level1 Approval Number:	18828 0424 310 31a 31a BCTS

Visa requires limited testing to ascertain a Product's compliance with applicable specifications and may also require interoperability testing with other approved products. Visa's limited testing program is not designed to establish the functionality of your approved Product in all potential conditions in which it may be used. Visa's approval does not in any circumstances include or imply any guarantees, assurances or warranties that the approved Product will operate in all possible settings or in connection with any other approved product.

Visa's approval is limited to the Product supporting the following:

EVALUATED APPLICATION(S)

- Quick Visa Smart Debit/Credit

EVALUATED SPECIFICATION(S)

- Visa Contactless Payment Specification: 2.2

SCOPE OF APPROVAL

This Product is approved for issuance anywhere in the world. Before deploying this product into the field, the acquirer is required to complete Level 3 (L3) testing.

POINTS FOR CONSIDERATION

The Product cannot support dates beyond January 18, 2038. Any deployed Product must be replaced by this date. This information must be disclosed to prospective buyers before any sale of the Product.

The design of the product may cause the contactless interface to be activated when attempting a magnetic stripe (and/or contact) transaction.

Please contact the vendor for further information.

CONDITIONS

Visa only requires limited testing and the onus is on the manufacturer of the Product to conduct testing to ensure that the Product interoperates with other Visa approved products and that environmental issues do not adversely affect performance of the Product.

Visa's approval only applies to products that are identical to the Product that was the subject of the testing referenced in this letter. A product should not be considered approved by Visa, nor promoted as approved, if any aspect of the product is different from the Product that was tested, even if the product conforms to the basic Product description contained in this letter. For example, if a product contains chips, applications or operating systems that have the same name or model number as those tested previously and given a Letter of Approval, but in fact are not identical to those tested previously and given a Letter of Approval, the product should not be considered or promoted as approved by Visa.

All products submitted for testing and approval are required to be submitted pursuant to a Visa International Service Association Approval Services Testing Agreement. The approval granted in this letter is subject in all respects to the terms and conditions of the Visa International Service Association Approval Services Testing Agreement.

The issuance of this letter is conditioned upon all necessary agreements having been executed, including without limitation, the applicable license agreements with Visa and this approval letter shall be of no force and effect unless such agreements have been executed contemporaneously with or prior to the issuance of this letter.

Approval granted by Visa does not supersede additional testing requirements as may be imposed by national testing bodies, financial institutions, network services providers, Visa Region Specific Requirements or other customers or requirements imposed by the Visa Product Brand Standards and/or Visa Global Brand Management. The Manufacturer is encouraged to ensure that testing requirements from all relevant parties have been met and approvals granted prior to sale or installation of the product.

Visa's approval is granted solely in connection with the product tested and to the submitting vendor. Such approval may not be assigned, transferred or sublicensed, either directly or indirectly, by operation of law or otherwise. Only those product manufacturers receiving a Visa approval for a product may claim that they have the approval.

Visa may revoke the approval at any time. Because this approval may be revoked at any time, no third party should rely on this letter at any time without first confirming the continued effectiveness of the approval with Visa's Approval Services. Unless revoked earlier, Visa's approval of the Product shall remain in effect until June 02, 2029. Visa reserves the right to modify the terms or duration of this approval at its sole discretion to accommodate business or security requirements. Even though Visa has approved this Product, as described in this letter, the manufacturer of each product shall be responsible for compliance with all applicable specifications and for all liabilities resulting from the use or distribution of the product.

You may communicate to third parties that the Product is Visa approved product provided, however, that you also communicate any of the limitations on Visa's approval described above under the heading, (a) Scope of Approval, (b) Comments and/or Specification Deviation(s), (c) Condition(s), and all written communications referring to Visa approval shall contain the following legend:

"When granted, Visa approval is provided by Visa to ensure certain security and operational characteristics important to Visa's systems as a whole, but Visa approval does not under any circumstances include any endorsement or warranty regarding the functionality, quality or performance of any particular product or service. Visa does not warrant any products or services provided by third parties. Visa approval does not under any circumstances include or imply any product warranties from Visa, including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by Visa. All rights and remedies regarding products and services which have received Visa approval shall be provided by the party providing such products or services, and not by Visa."

Sincerely,

Signed by:

DA67B553106C436...
Sherri Tasto

Senior Director
Chip Testing and Approval Services
Visa International Service Association

cc: Visa Reference Number: CDXTCL02924B

Payment Card Industry (PCI) Security Standards Council
Letter of Approval
PCI PIN Transaction Security Testing Program

13 Nov 2020

Guo Yonghong

ShenZhen Xinguodu Technology Co Ltd

18F, Block B, 10 Building, Shenzhenwan Science and Technology & Ecological Park,
Nanshan, Shenzhen, Guangdong, China 518000
Shenzhen, Guangdong 518000
China

PCI SSC PTS Approval Number:	4-90124	Approval Class:	PED
Manufacturer:	ShenZhen Xinguodu Technology Co Ltd		
Name & Model Number:	N86		
Hardware Version Number:	V1.0x, V1.1x, V1.2x, V1.3x, V1.4x, V1.5x, V1.6x, V1.7x		
Firmware Number:	Z32010011.xxxxxx		
Application Version Number if applicable:			
PIN Support:	Online & Offline		
Key Management TDES:	DUKPT,MK/SK		
Key Management AES:	MK/SK		
Prompt Control:	Acquirer-controlled		
PIN Entry Technology:	Touch Screen		
Functions Provided:	Display,ICCR,MSR,CTLS,PIN Entry,OP,SRED		
Approved Components:			
Approved to meet PCI Device Security Requirements POI v 6.			

Dear Guo Yonghong:

PCI Security Standards Council, LLC ("PCI SSC") has received your request for PIN Transaction Security ("PTS") approval for the information identified above. In connection with your request, we have reviewed PTS Test Report number **TPTS2048U1TP**, which was generated by **Beijing Unionpay Card Technology Co. LTD.**

After assessing such file (including, but not limited to, the Report), PCI SSC has found reasonable evidence that the submitted sample(s) of the above-referenced PTS Device sufficiently conform to PCI SSC's PCI PTS Requirements, as specified in the *PCI PTS Manufacturer Self-Assessment*.

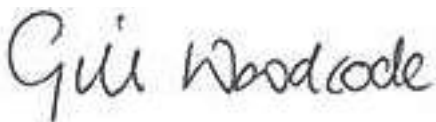
PCI SSC hereby (a) grants your PTS device approval, based on the requirements stated in the *PCI PIN Transaction Security Requirements* manual (which may be amended at any time and from time to time by PCI SSC), and (b) agrees to include your PTS device in *PCI SSC's Approved PIN Transaction Security Device List*. PCI SSC's grant to your PTS device model is subject and specifically incorporates (i) the General Terms and Conditions to the Letter of Approval enclosed as Exhibit A; and (ii) the terms and conditions of the Payment Card Industry *PIN Transaction Security Evaluation Testing Vendor Release Agreement* by and between PCI SSC and you. Because PCI SSC's grant is subject to such limitations, including certain events of termination, you and any third parties should confirm that such approval is current and has not been terminated by referring to the list of approved PTS devices published on the PCI SSC website, www.pcisecuritystandards.org.

When granted, PCI SSC approval is provided by PCI SSC to ensure certain security and operational characteristics important to the achievement of PCI SSC's goals, but PCI SSC approval does not under any circumstances include any endorsement or warranty regarding the functionality, quality, or performance of any particular product or service. PCI SSC does not warrant any products or services provided by third parties. PCI SSC approval does not under any circumstances include or imply any product warranties from PCI SSC, including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by PCI SSC. All rights and remedies regarding products and services which have received PCI SSC approval, shall be provided by the party providing such products or services, and not by PCI SSC.

This Letter of Approval is effective upon dispatch from PCI SSC, LLC.

Effective Date:	13 Nov 2020
Expiry Date:	30 Apr 2030

PCI Security Standards Council, LLC

By: 

Name: Gill Woodcock

Title: Director of Certification Programs, The PCI Security Standards Council

Exhibit A: General Terms and Conditions to the Letter of Approval

PCI SSC's approval is based on the evaluation and testing performed by **Beijing Unionpay Card Technology Co. LTD** in **China**. PCI SSC's approval only applies to the PIN Transaction Security ("PTS") devices identical to the PTS device model evaluated and tested by **Beijing Unionpay Card Technology Co. LTD**, as indicated by the PTS device Identifier ("Identifier").

If any aspect of the PTS device is different from that which was evaluated and tested by **Beijing Unionpay Card Technology Co. LTD**, then the PTS device should not be considered approved by PCI SSC, nor promoted as approved, even if the PTS device conforms to the basic PTS model description contained in the approval letter.

Approval granted by PCI SSC does not supersede or relieve vendor from any additional testing requirements as may be imposed by national testing bodies, financial institutions, network services providers, or other customers. The manufacturer is encouraged to ensure that testing requirements from all relevant parties have been met and approvals granted prior to the sale or installation of the PTS device.

PCI SSC approval may be revoked at any time. Because this approval may be revoked at any time, no PCI SSC Member or other third party should rely on the approval letter at any time without first confirming the continued effectiveness of the approval with PCI SSC. PCI SSC reserves the right to modify the terms or duration of the approval at its sole discretion to accommodate business or security requirements. This Letter of Approval is subject to and hereby incorporates by reference the terms and conditions of the *Payment Card Industry PIN Transaction Security Evaluation Testing Vendor Release Agreement* by and between PCI SSC and the recipient of this Letter of Approval.

Note:

All PTS devices submitted for testing must be identified such that a future purchaser can be certain of purchasing a PTS model that has successfully completed the evaluation process and has been approved by PCI SSC. The Identifier will be:

- 1. Recognizable*
- 2. Used by Customers of the participating payment brands during the purchase process*
- 3. Used by PCI SSC and the testing laboratory to identify clearly the tested and approved the PTS device.*

The components of the PTS Identifier include:

- 1. Vendor Name*
- 2. Marketing Model Name/Number*
- 3. Hardware Version Number*
- 4. Firmware Version Number*
- 5. Application Number, if applicable*

The PTS Identifier information will be included in the PCI SSC approval letter and on the PCI SSC website. If an identical PTS device is used across a family of devices, manufacturers are cautioned against using the PTS device Identifier information that may restrict approval only to the PTS model depicted.

You may communicate to Customers¹ of the participating payment brands that PCI SSC has approved the PIN Transaction Security Device to be in compliance with PCI SSC's PIN Security Requirements provided, however, that:

- You also communicate any of the limitations on PCI SSC's approval described above under the heading Approval Process in the "PIN Transaction Security Device Testing and Approval Program Guide," and

- All written communications referring to PCI SSC approval shall contain the following legend:

"When granted, PCI SSC approval is provided by PCI SSC to ensure certain security and operational characteristics important to the achievement of PCI SSC's goals, but PCI SSC approval does not under any circumstances include any endorsement or warranty regarding the functionality, quality or performance of any particular product or service. PCI SSC does not warrant any products or services provided by third parties. PCI SSC approval does not under any circumstances include or imply any product warranties from PCI SSC, including, without limitation, any implied warranties of **merchantability, fitness for purpose, or non-infringement**, all of which are expressly disclaimed by PCI SSC. All rights and remedies regarding products and services which have received PCI SSC approval shall be provided by the party providing such products or services, and not by PCI SSC."

¹ See PCI PTS Device Testing and Approval Guide for more information

EXHIBIT A - FCC ID LABELING AND LOCATION

FCC ID Label



FCC ID Label Location



The label shown shall be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time purchase (Labeling requirements per 2.925)



ATTESTATION OF CONFORMITY

Attestation Number : AOC RSZ200328018-RFA3-03
Date of Issue: 2020-05-25
Product: Smart Card Reader
Model(s): ACR1252
Brand: N/A
Manufacturer & Address: Advanced Card Systems Ltd.
Units 4108 - 4110, 41st Floor, Manhattan Place, 23 Wing Tai
Road, Kowloon Bay, Hong Kong

Bay Area Compliance Laboratories Corp. (Shenzhen) hereby declares that the submitted sample(s) of the above equipment has been tested for CE-marking and in accordance with the following European Directives and Standards:

Radio Equipment Directive 2014/53/EU

Essential Requirement	Harmonized Standards	Test Report Number
Radio Spectrum	ETSI EN 300 330 V2.1.1 (2017-02)	RSZ200328018-22A3
EMC	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03)	RSZ200328018-02A3
Safety	EN 62368-1:2014+A11:2017	RSZ200328018-SF
Health/SAR	EN 50364:2018	RSZ200328018A3
* Note: Harmonized Standards not yet cited in OJ		



Mark is permitted only after all applicable requirements are met in accordance with the European Union Rules, including the manufacturer's issuance of a "Declaration of Conformity". The Declaration of Conformity is issued under sole responsibility of manufacturer. This attestation is specific to the standard(s) stated above and compliance with additional standards and/or European directives are applicable.

Attestation by: Alvin Huang
Lab Manager

Signature